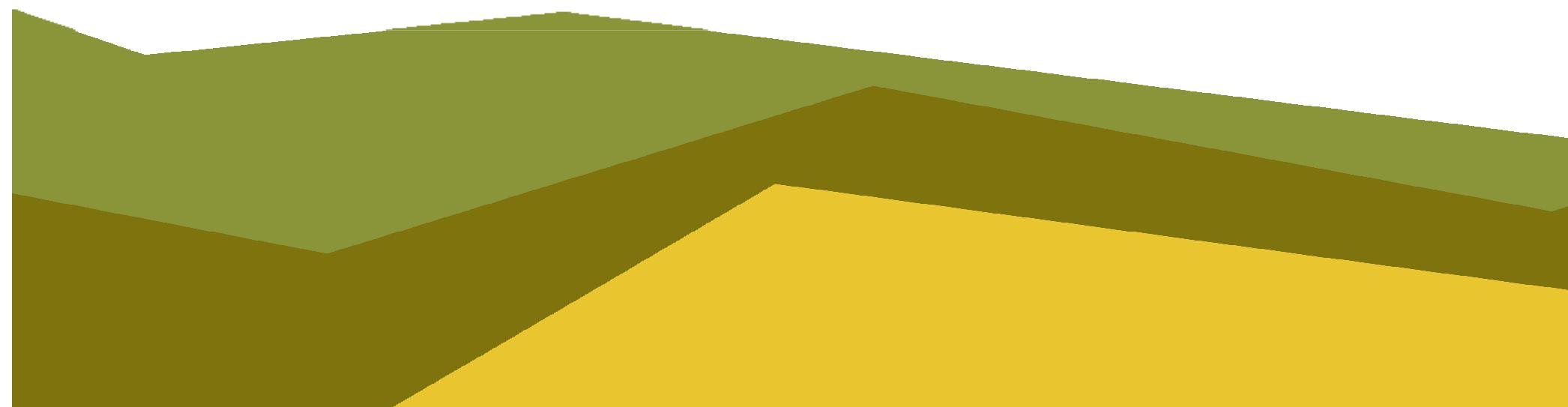
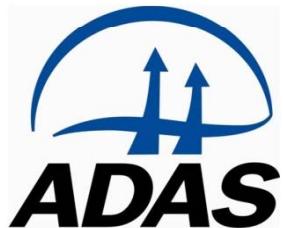


HGCA Fungicide Performance in Wheat



2009 - 2010



2009 *Septoria tritici* – product / a.i. list

1	epoxiconazole	Opus
2	chlorothalonil	Bravo
3	prothioconazole	Proline
4	epoxiconazole + metconazole	Brutus
5-8	experimental products	confidential

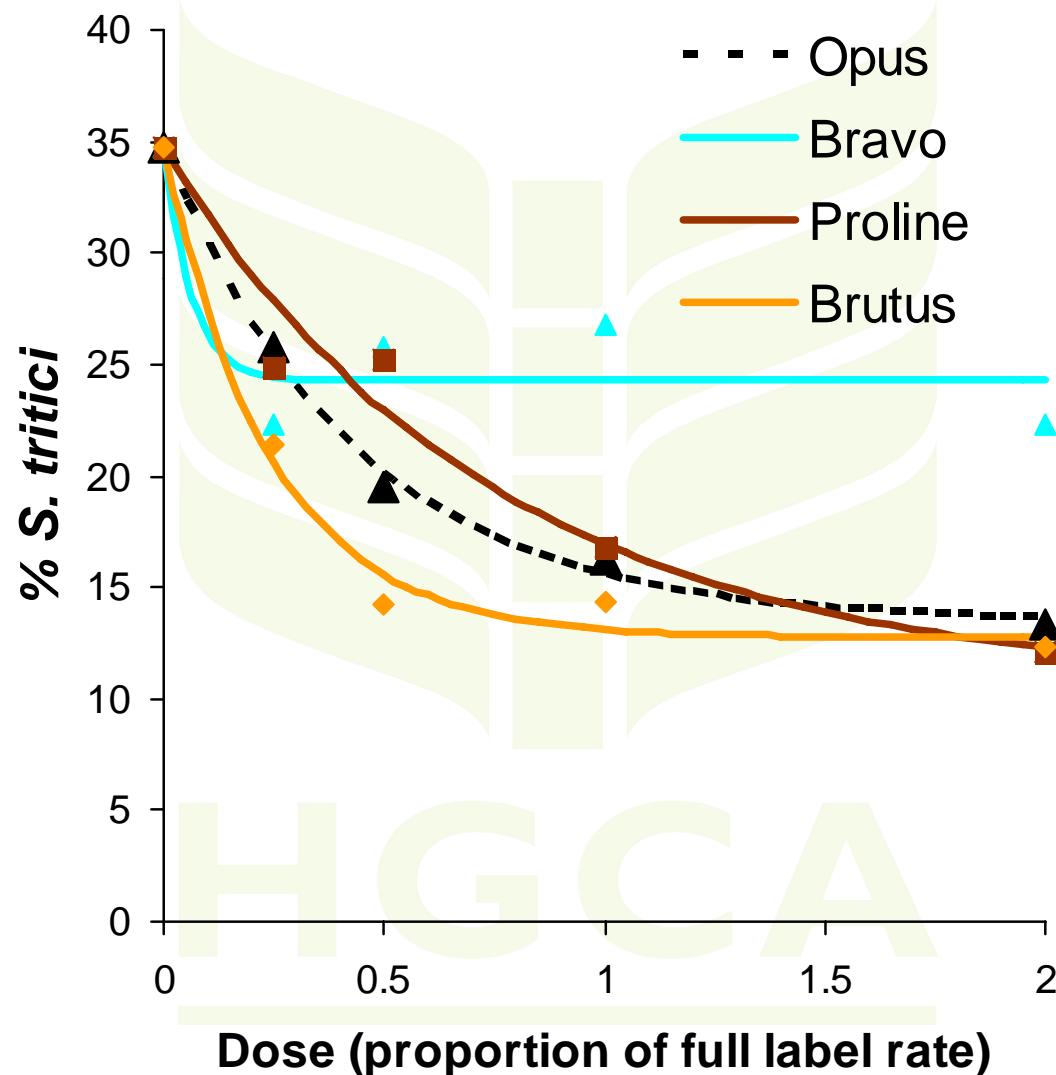


***S. tritici* – understanding the data**

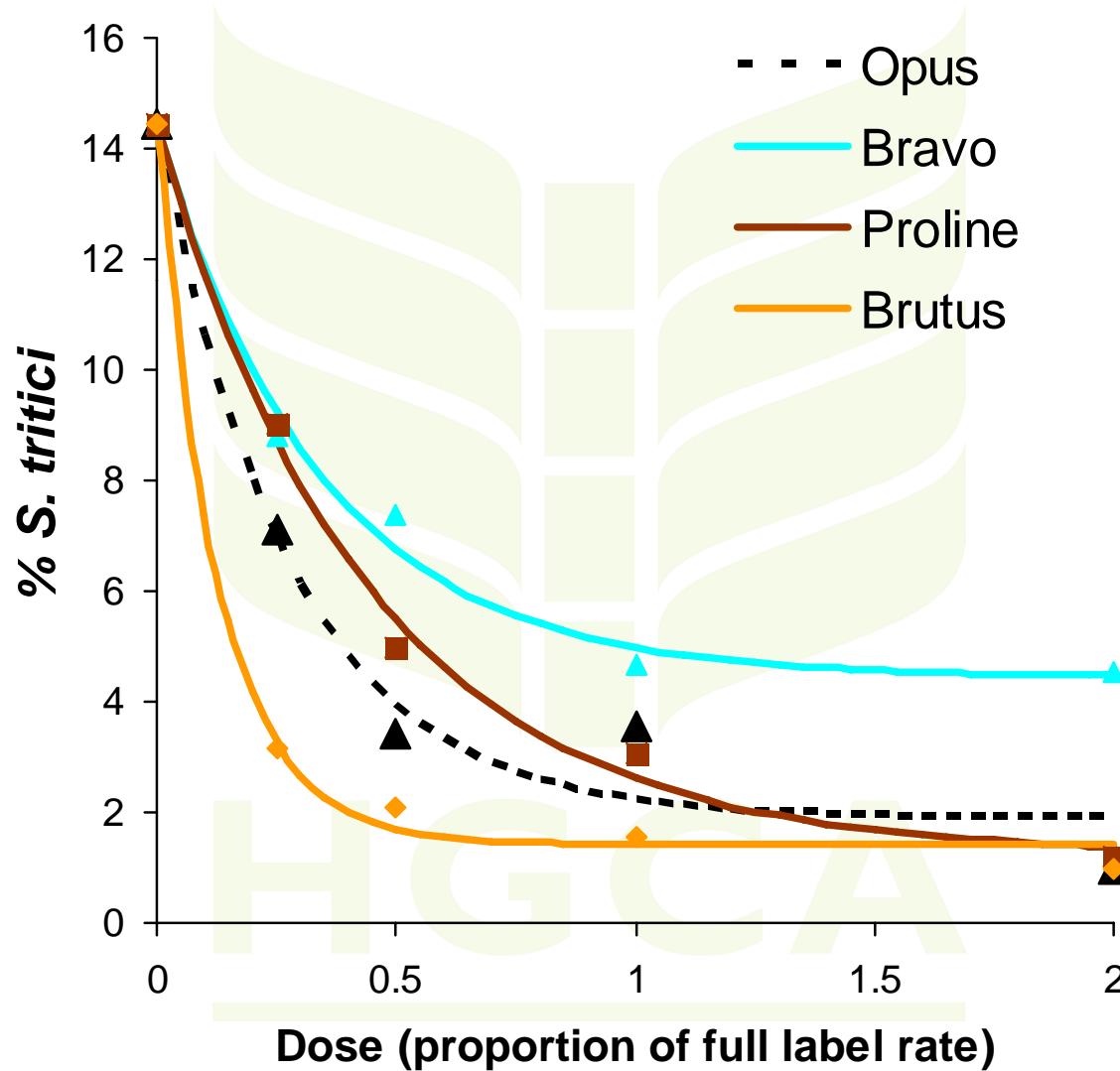
On each site, at each disease assessment, each leaf layer was assessed and categorised as:

- Eradicant,
 - Protectant,
 - Mixed.
-
- At SAC and Teagasc
 - Dose response data for T2 applications only
 - At Rosemaund and Andover
 - Dose responses from T1 and T2 - kept separate, for comparison

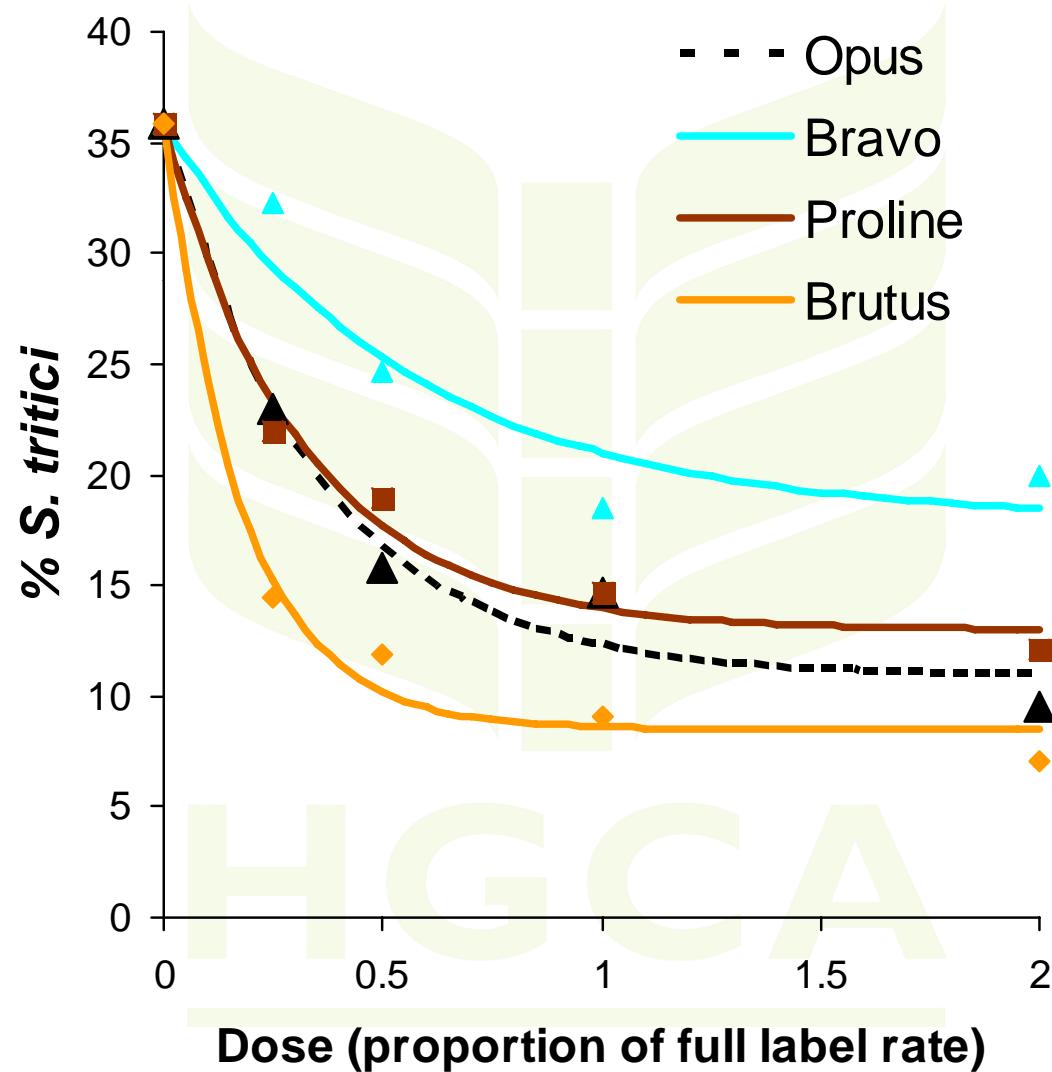
Overall (mainly T2) - eradicant 2009



Overall - protectant 2009

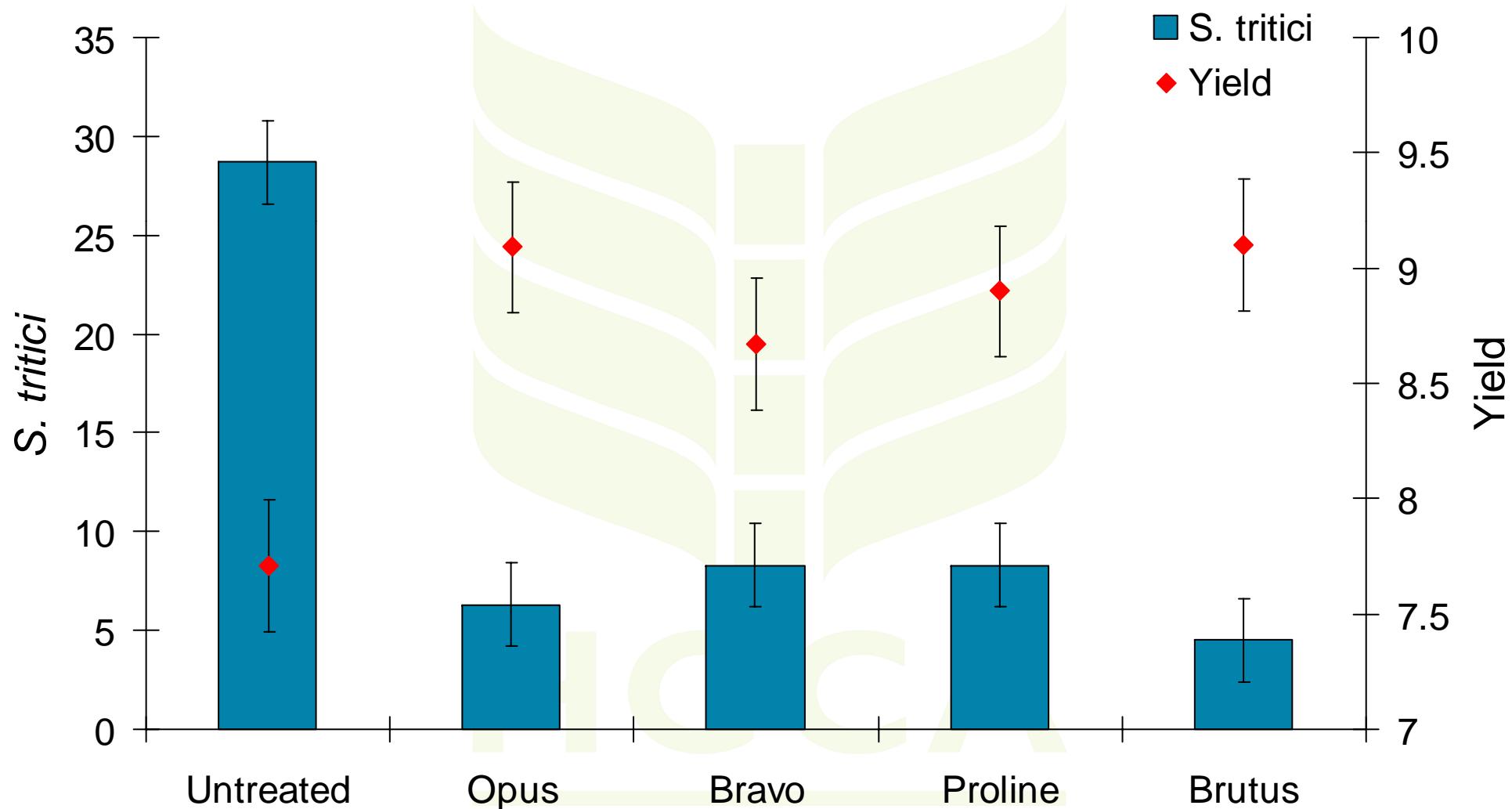


Overall - mixed activity 2009

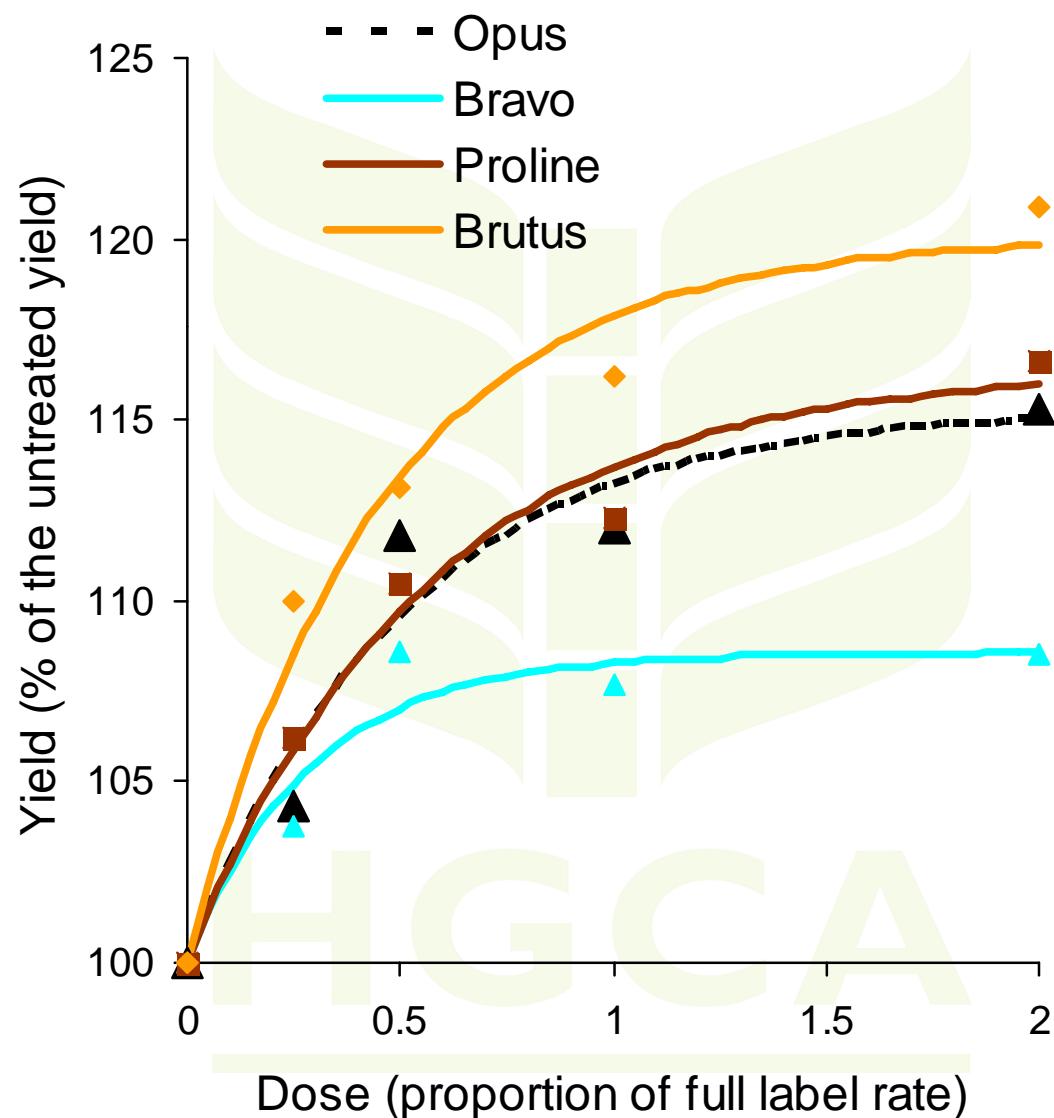


Half label rates at T1 and T2

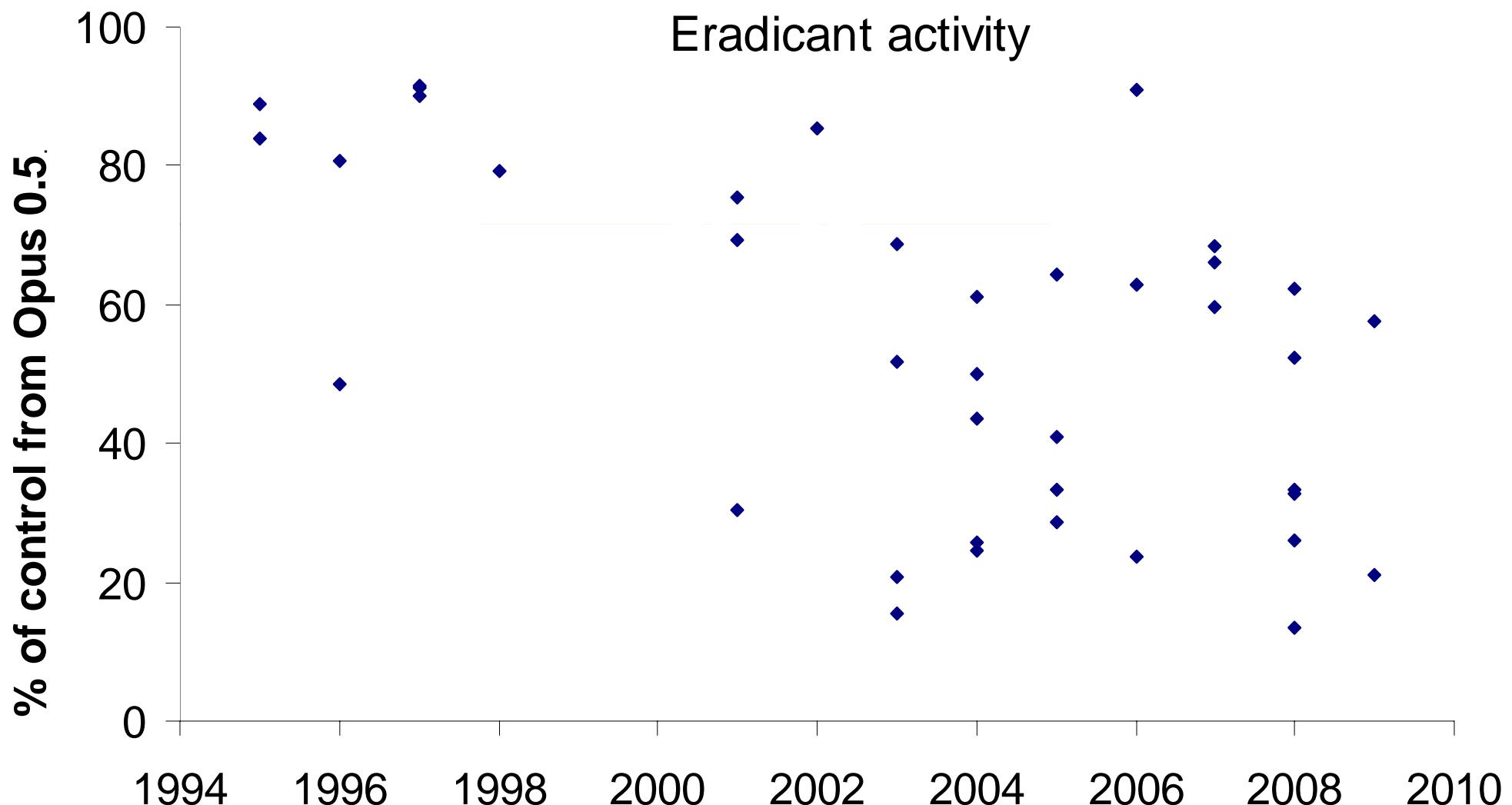
(Average of all *S. tritici* sites)



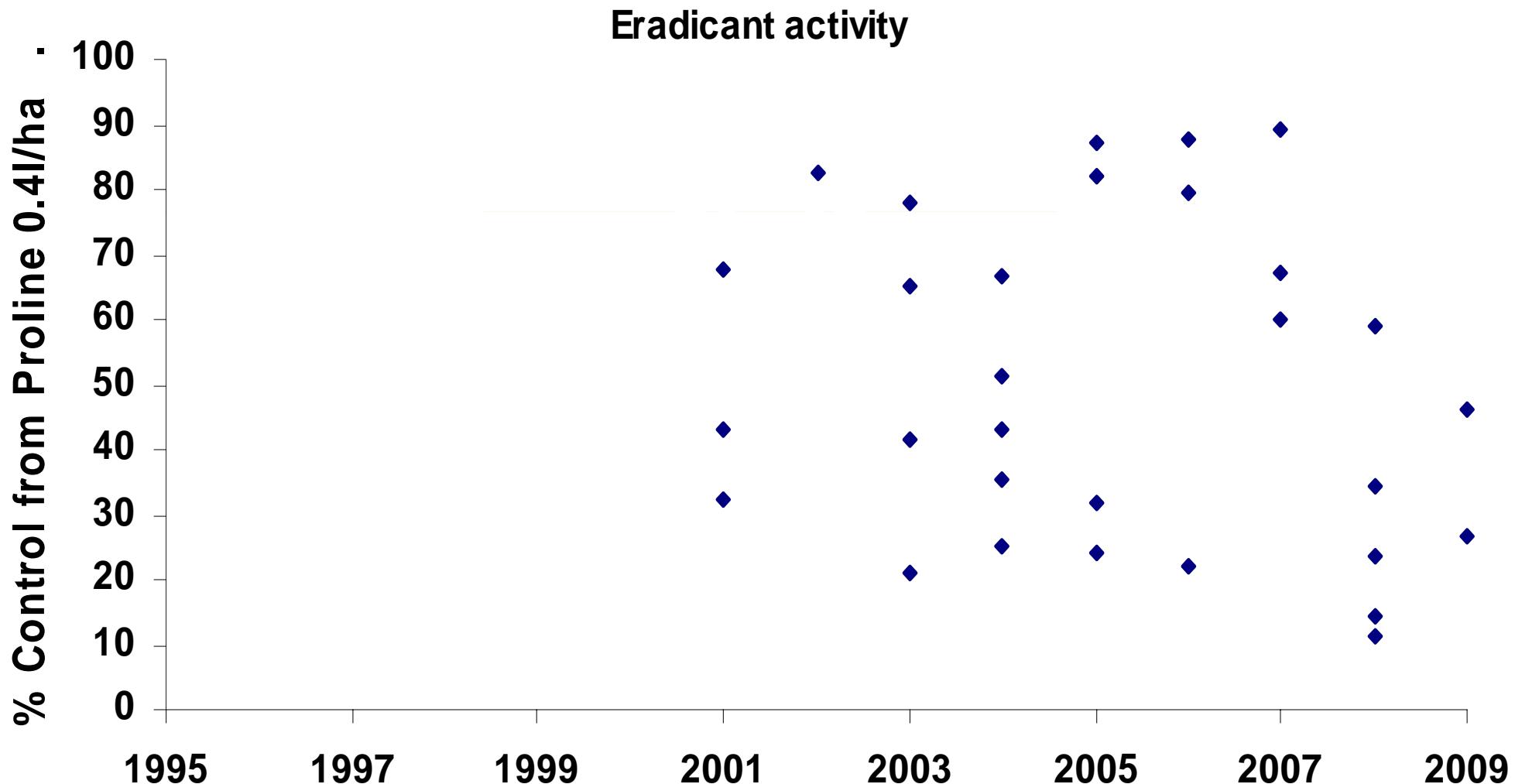
Yield response (all *S. tritici* sites)



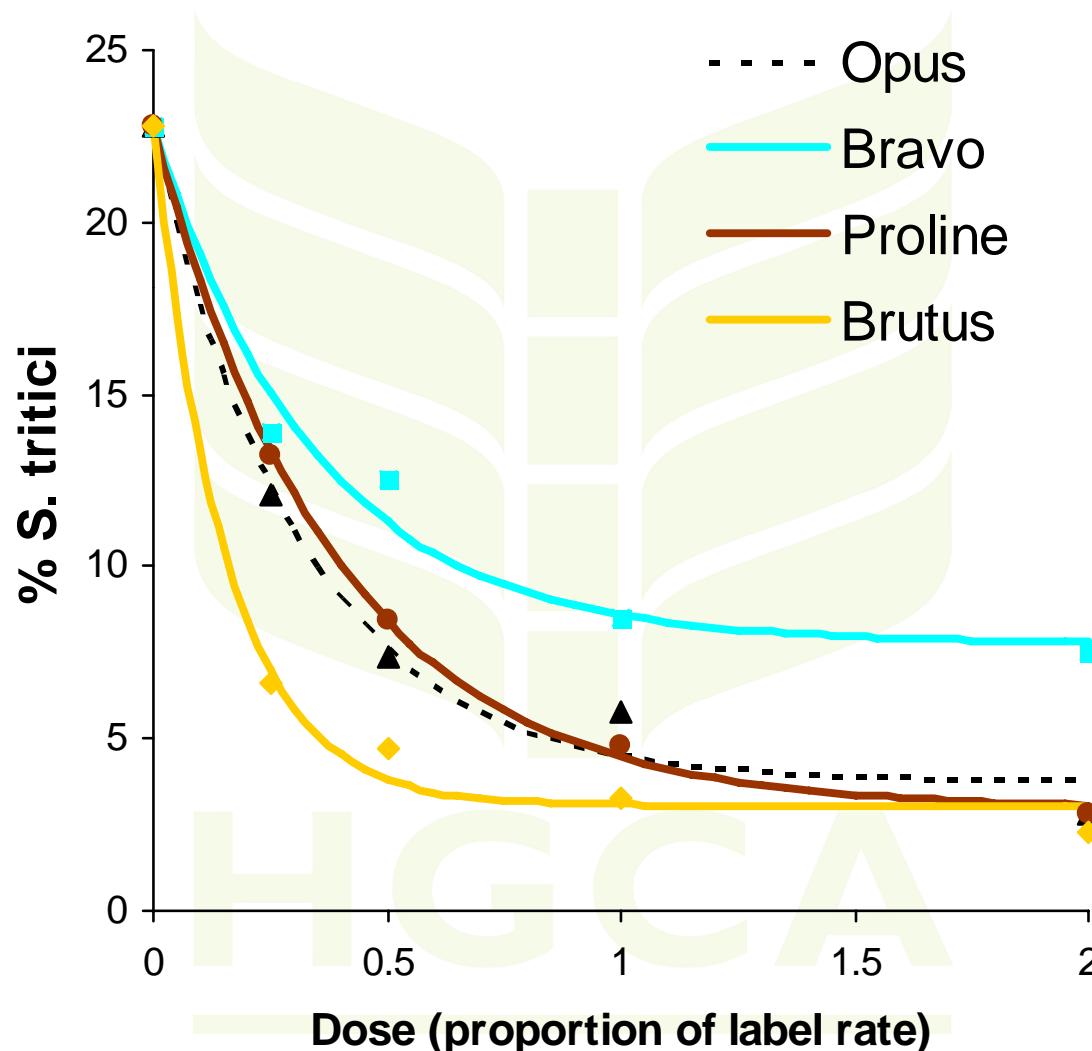
Proportion of control from Opus 0.5l/ha



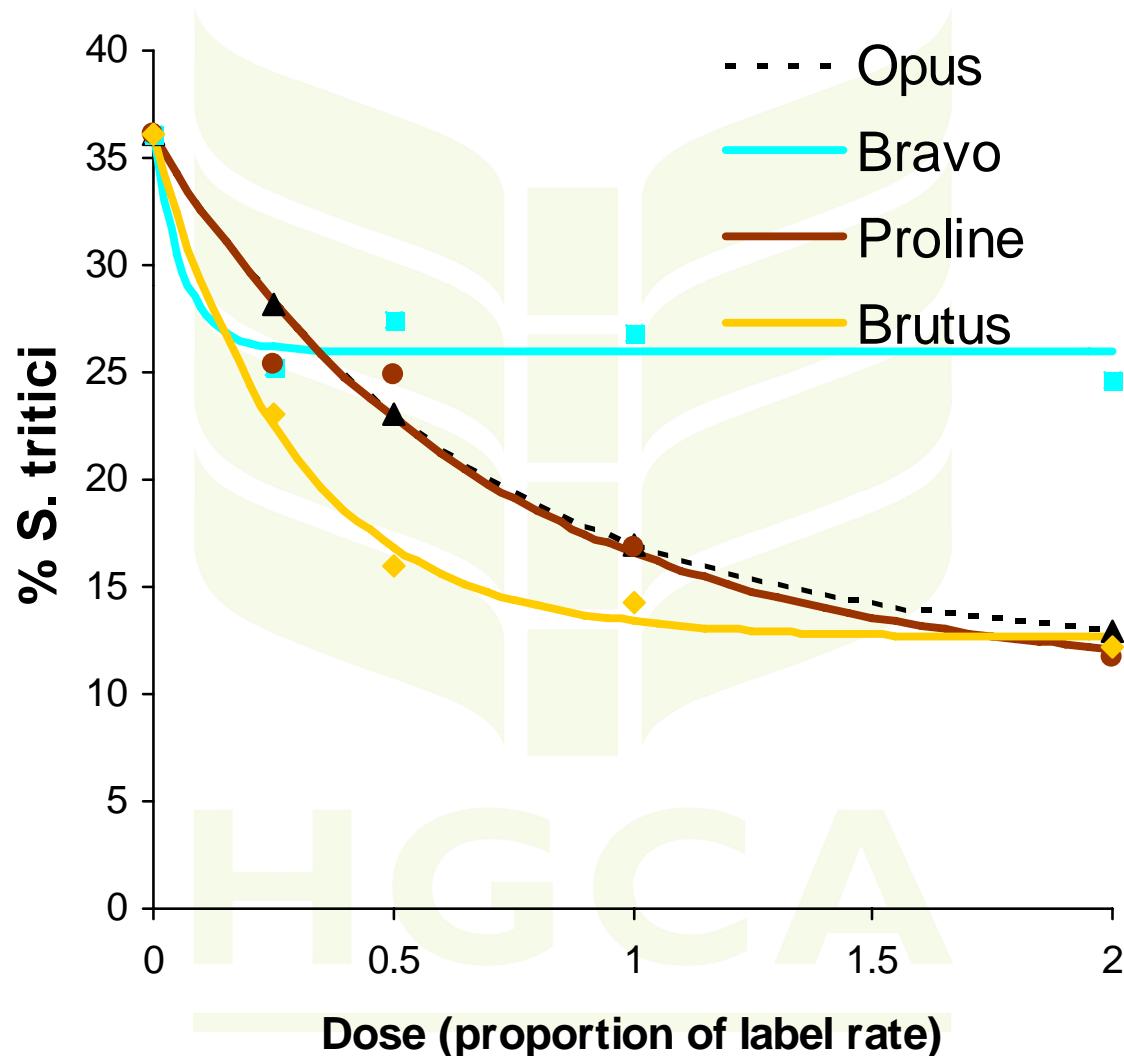
Proportion of control from Proline 0.4l/ha



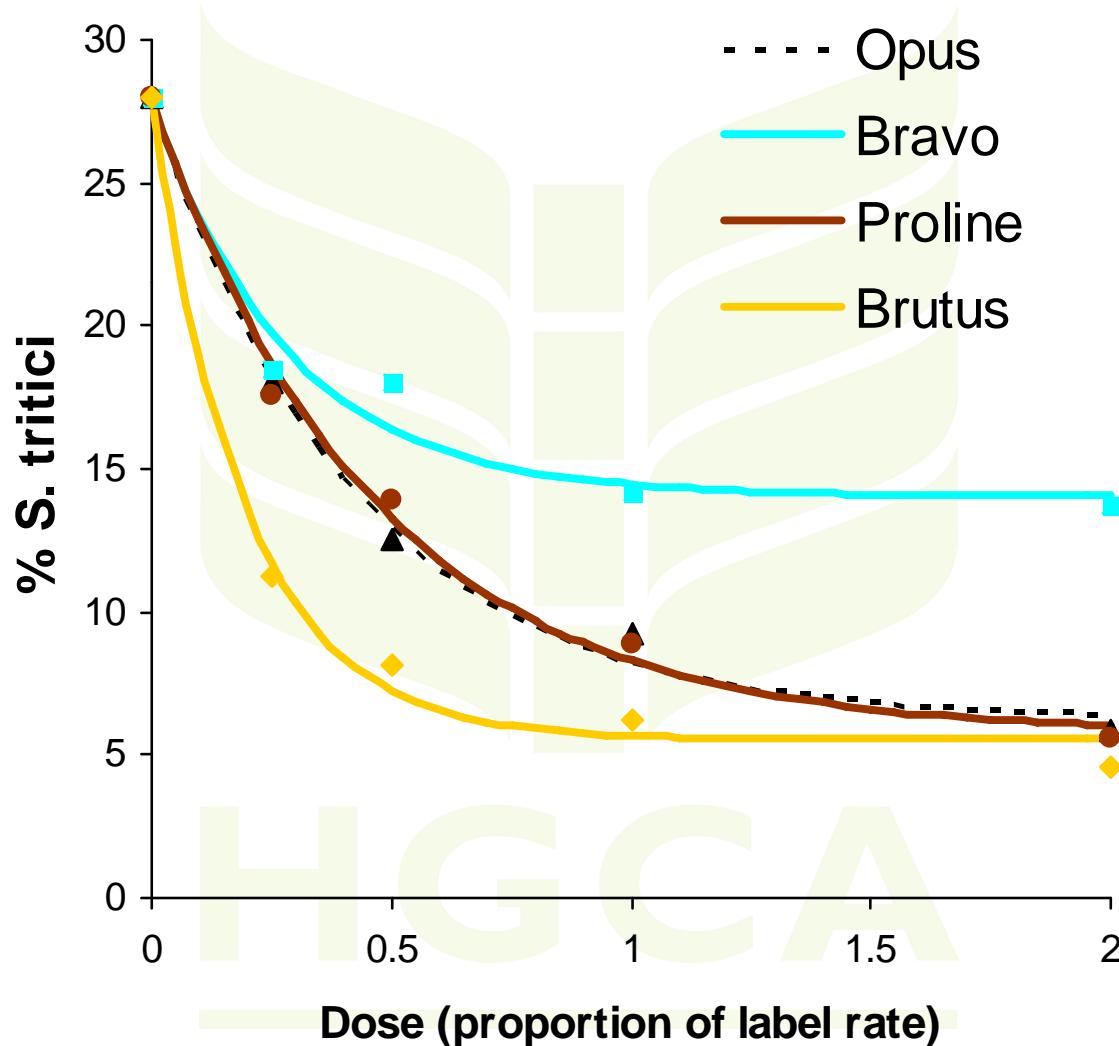
2008 + 09 combined analysis *S. tritici* protectant activity



2008 + 09 combined analysis *S. tritici* eradicant activity



2008 + 09 combined analysis *S. tritici* overall (eradicant and protectant)

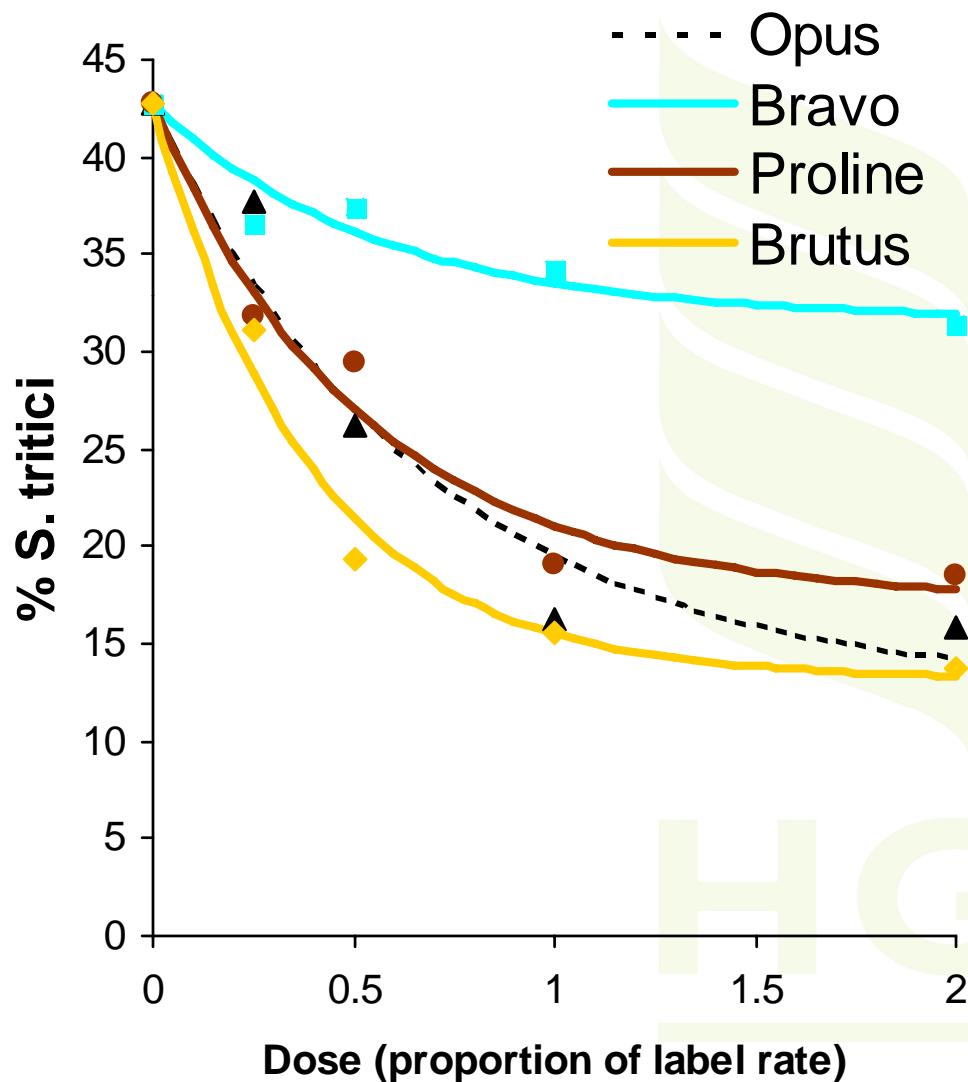


Does timing affect the rank order of activity?

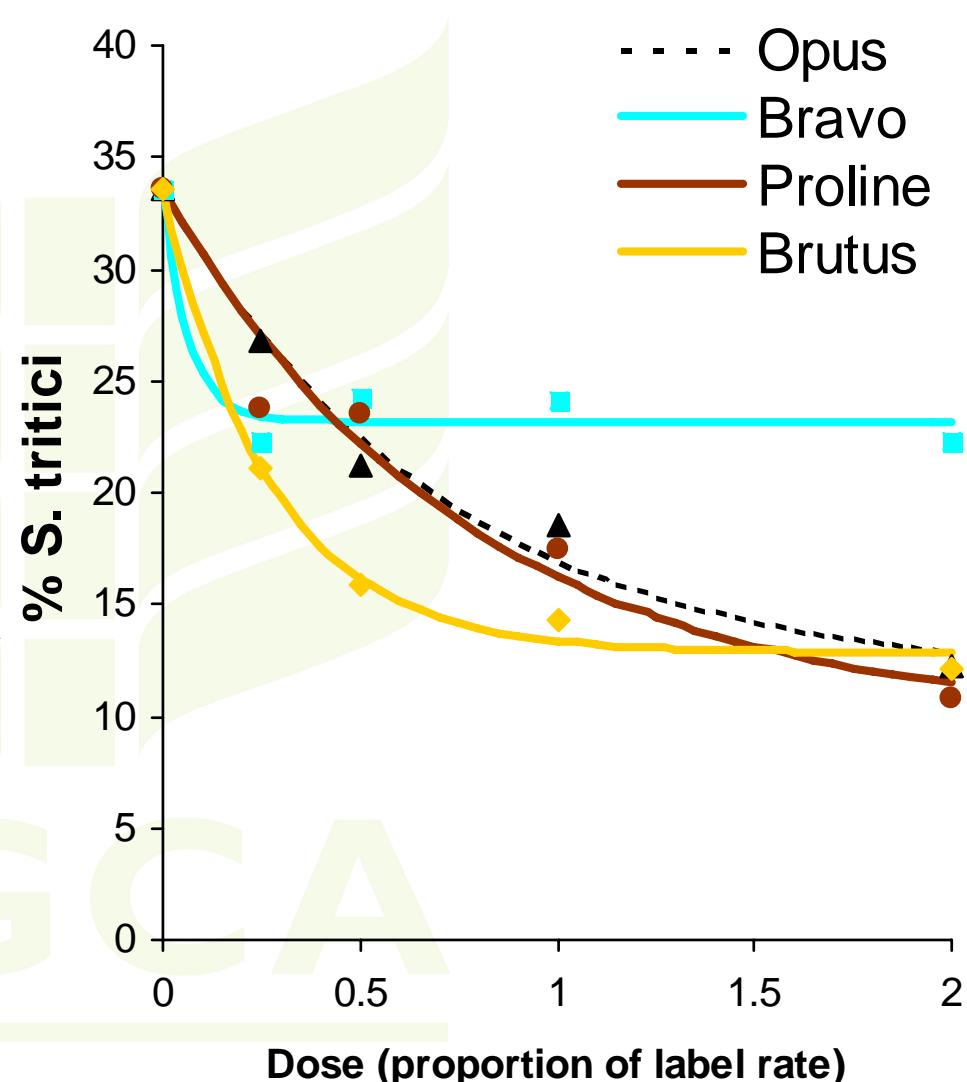
(2008 + 09 combined analysis)



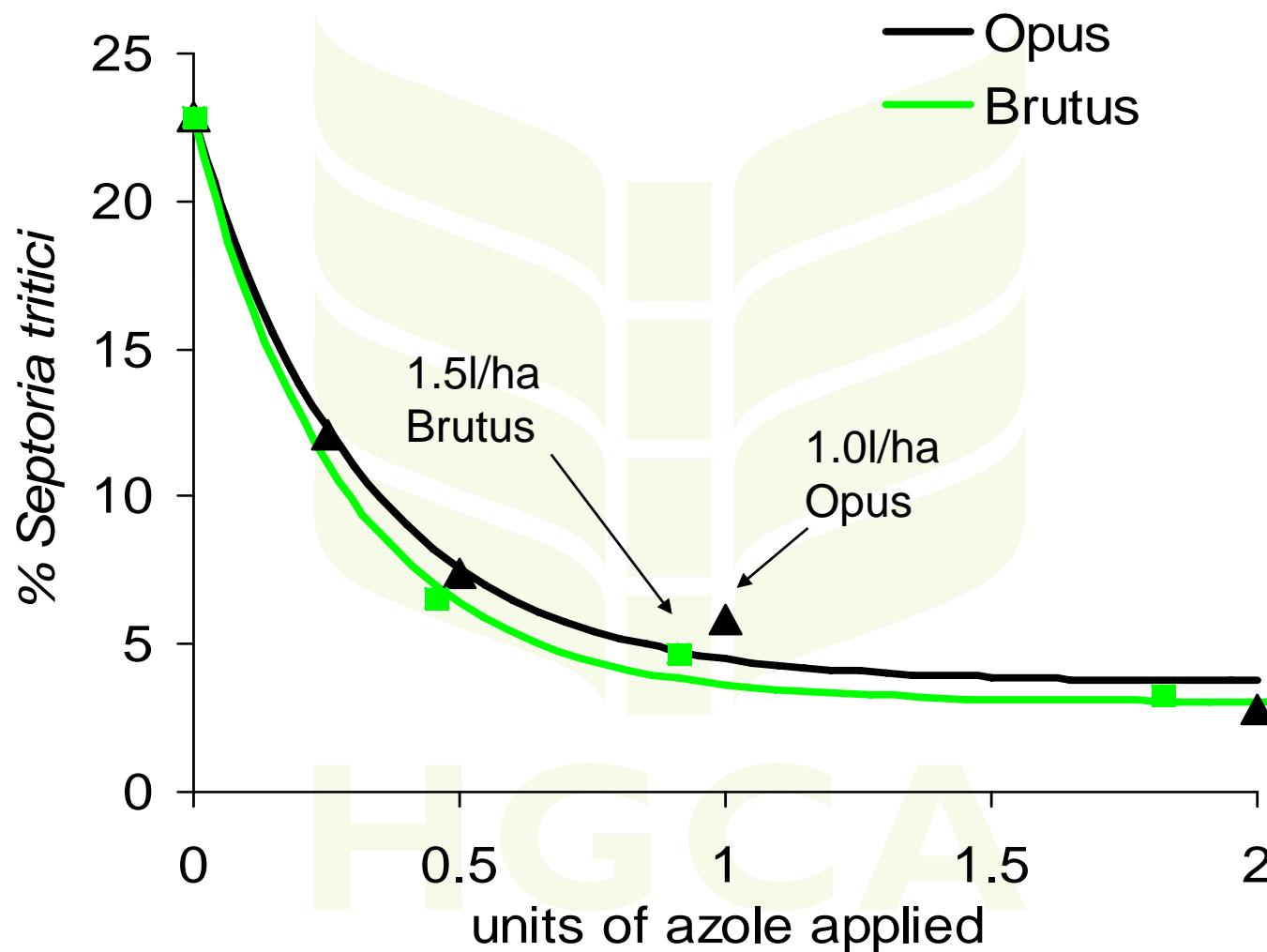
T1 eradicant



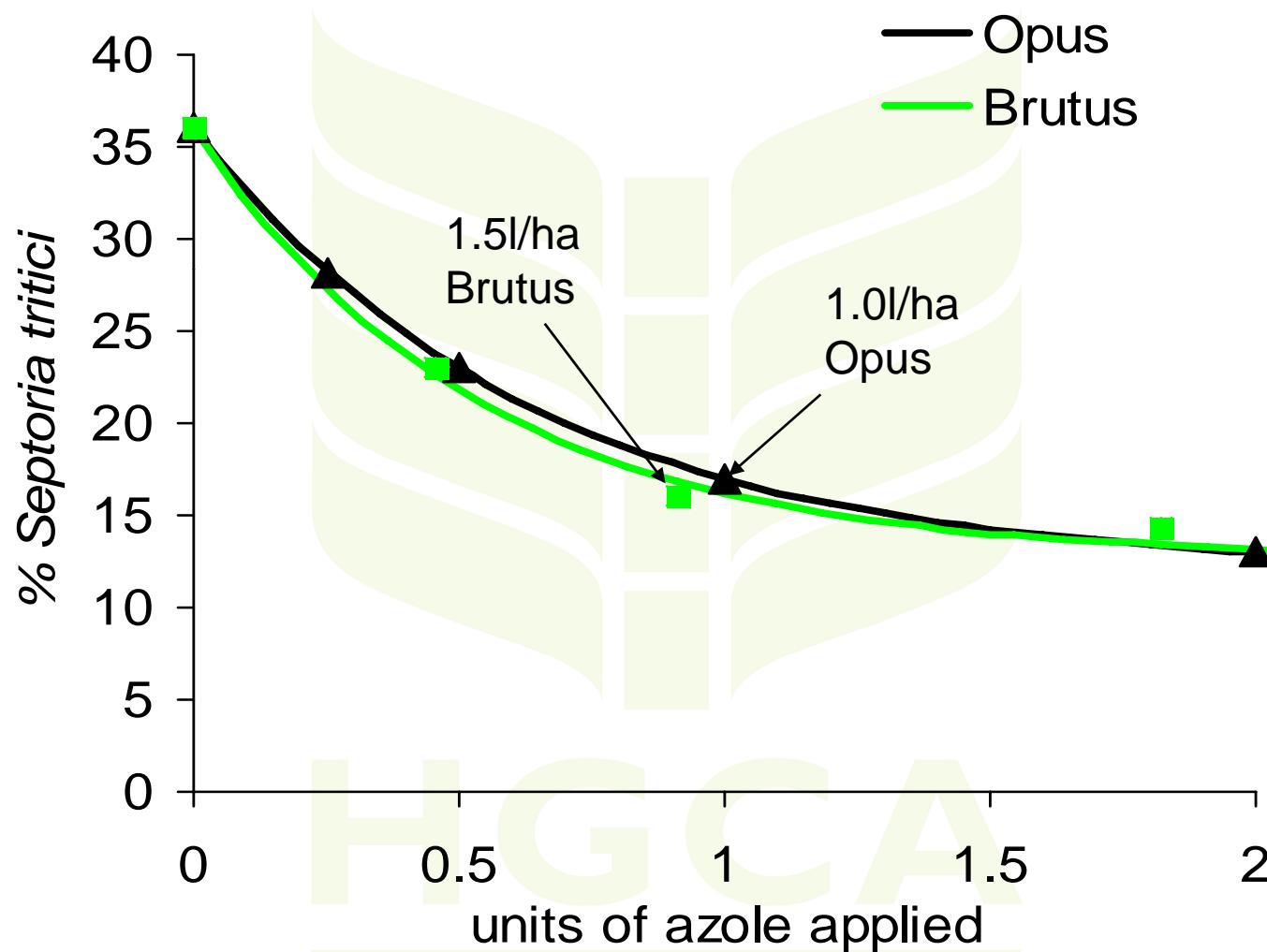
T2 eradicant



***S. tritici* 2008 + 2009 - Matched for units of azole Protectant**



S. tritici 2008 + 2009 - Matched for units of azole Eradicant



2009 Rust & Mildew trials

Disease	Location	Variety	Fungicide Evaluation
Yellow Rust	ADAS Norfolk	Robigus	Half dose at T1 (leaf 3, GS32)
Brown Rust	TAG Bedfordshire	Hereford	Dose response at T2 (flag leaf emerged, GS37-39)
Mildew	SAC Fife	Claire	Half dose T1 – T2 sequence

Yellow rust

In 2009

New races, virulent on several varieties

A significant epidemic despite frosts

Increased aggressiveness?

In 2010

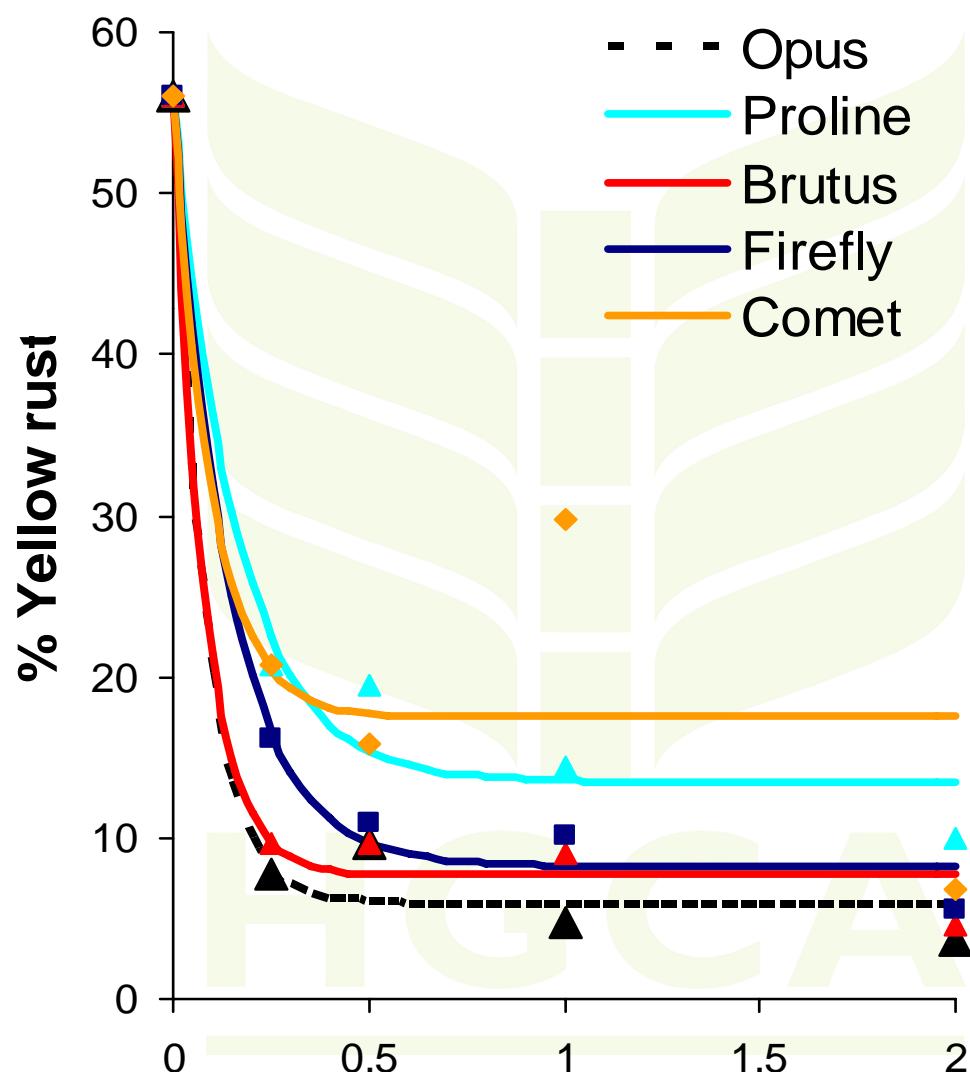
Over 25% of the UK cropping area rated 4 or less for YR.

Inoculum not likely to limit disease progress.

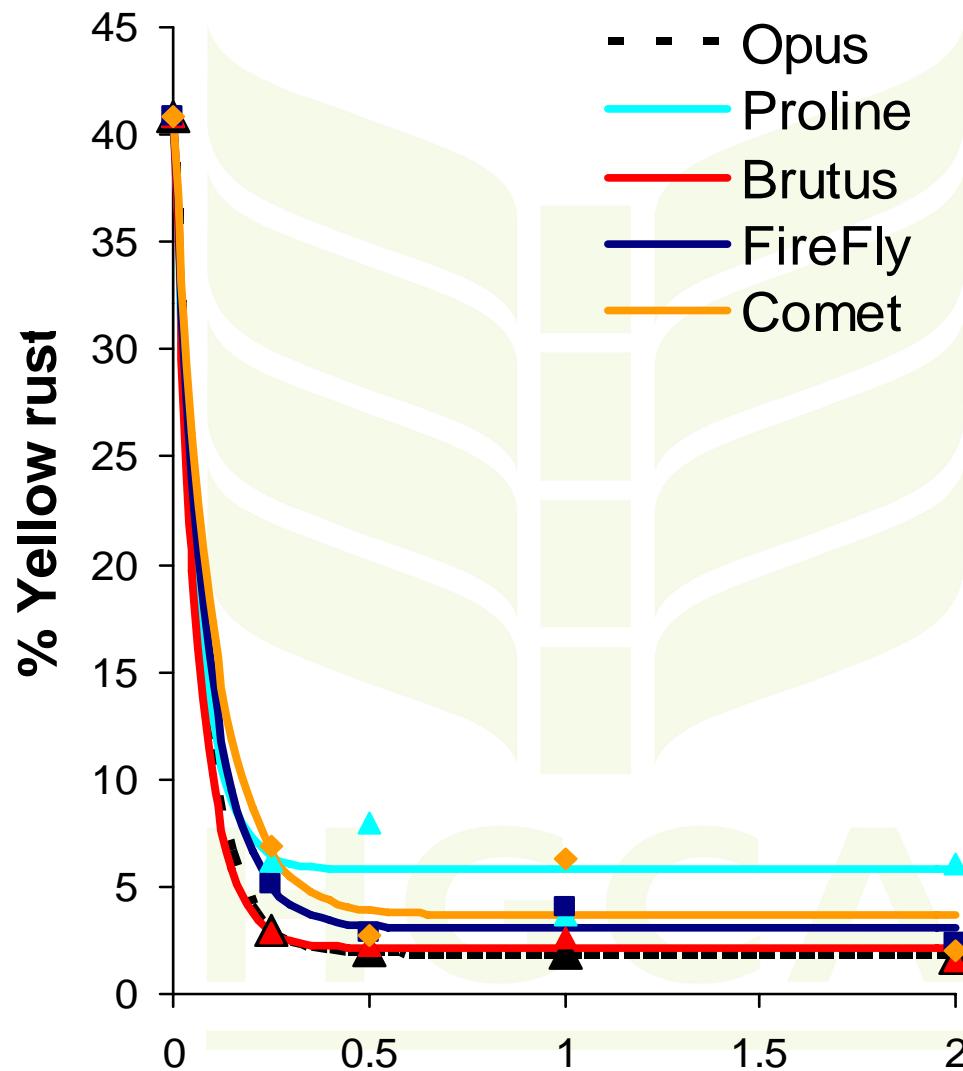
Overwinter frosts will determine earliness of the epidemic.



ADAS Yellow rust – 2009 (application at leaf 3 emerged)



ADAS Yellow rust – 2008 and 09



Brown rust

In 2009

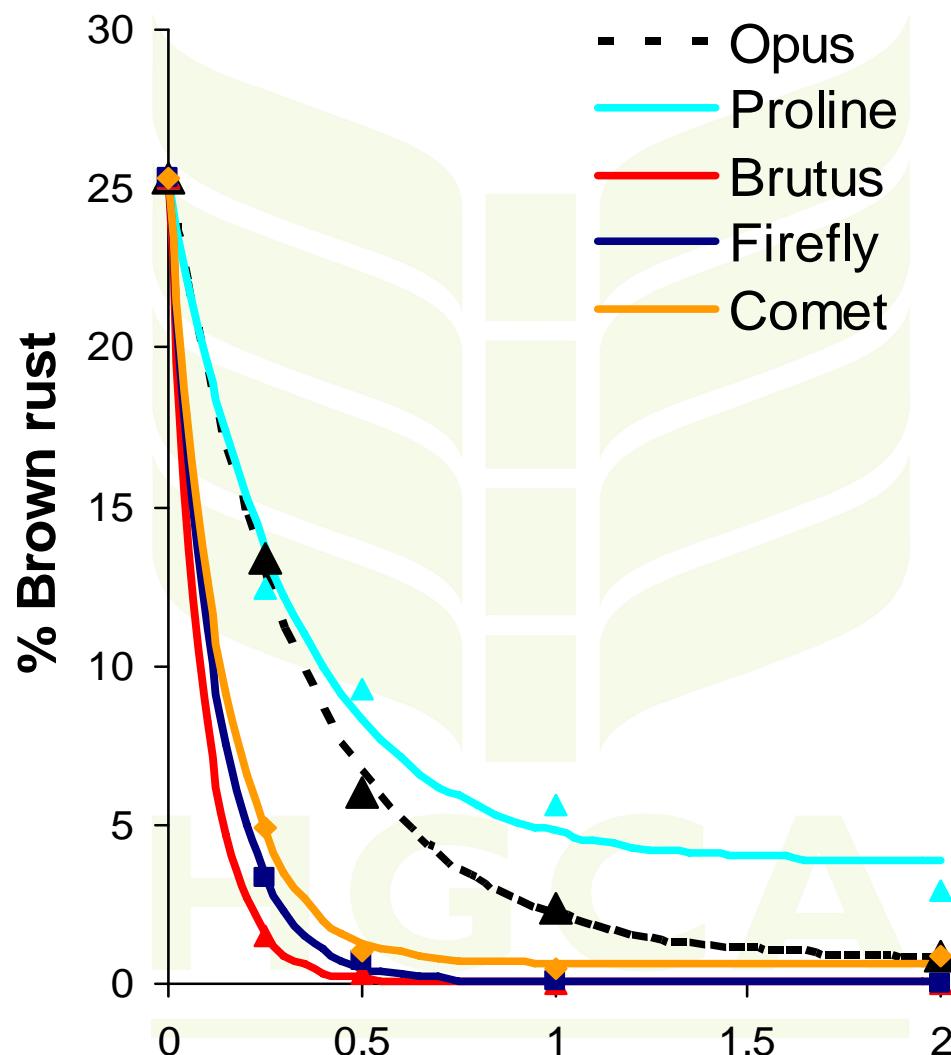
A late season epidemic,
due to average winter temperatures



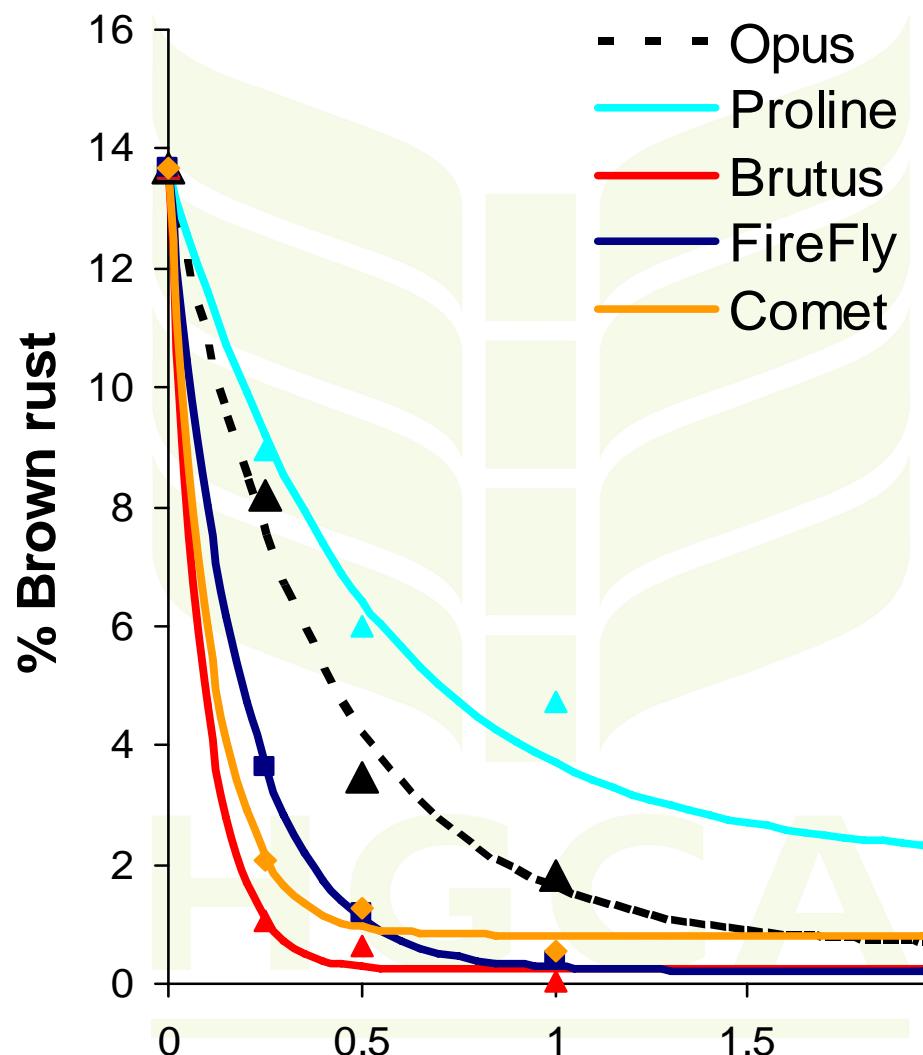
In 2010

- Brown rust ~ 60% of varieties are susceptible
- Already been seen in crops in the south (Crop monitor)
- Winter temperatures likely to determine earliness of the epidemic.

TAG Brown rust 09 (application at leaf 1 emerged)



TAG Brown rust 2008 and 09

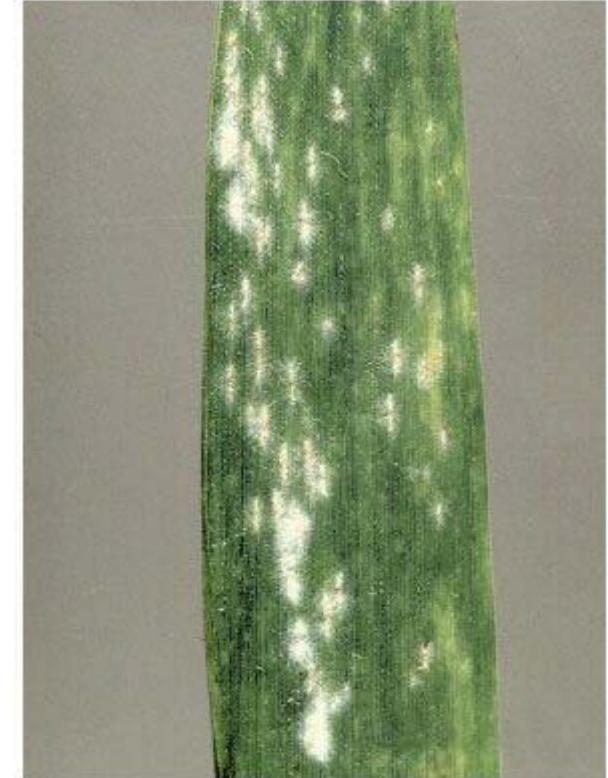


Powdery Mildew

In 2009

Favoured by:

- Later sowings
- Rapid lush spring growth,
- Low frequency of rainfall

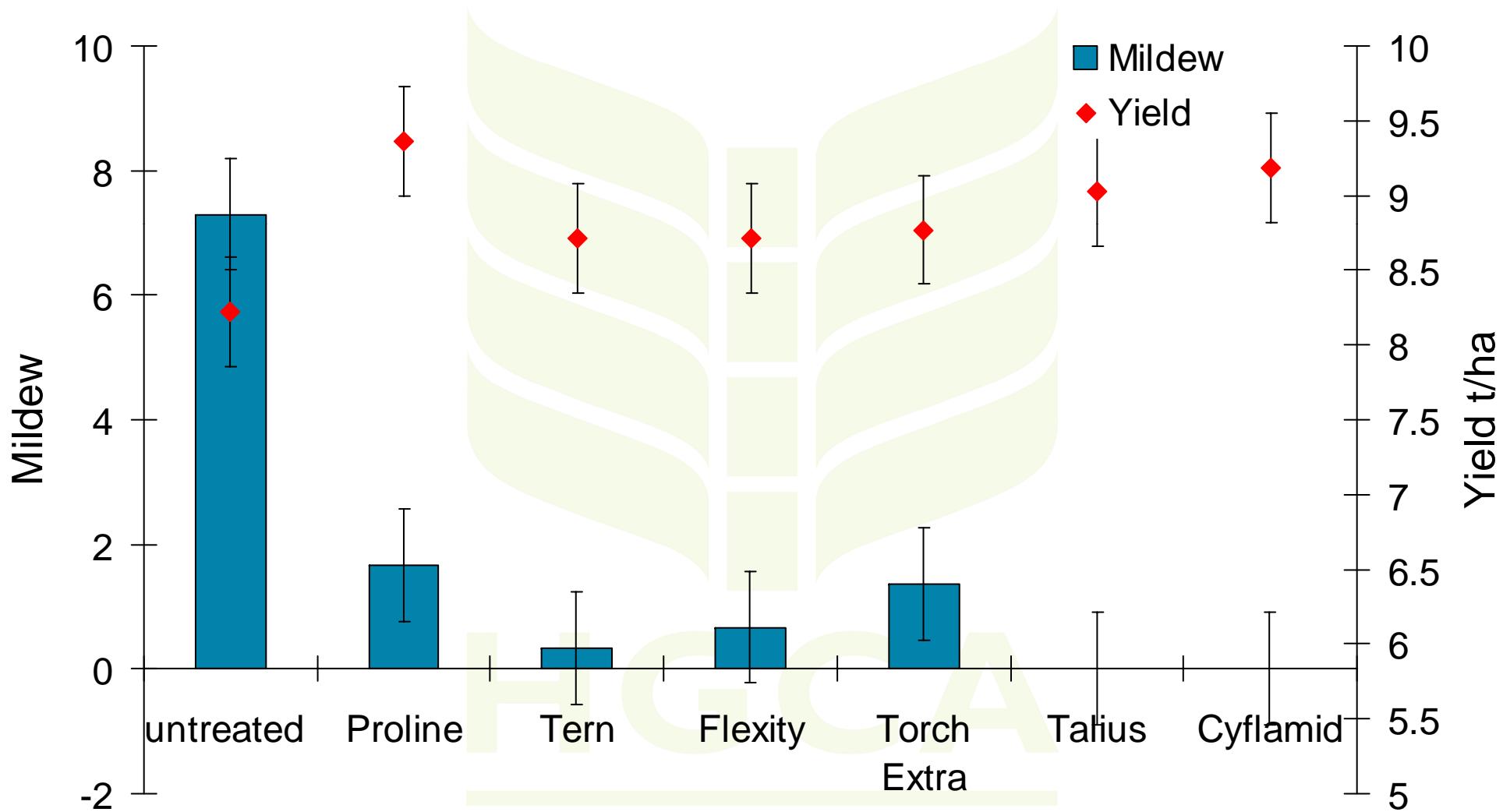


In 2010

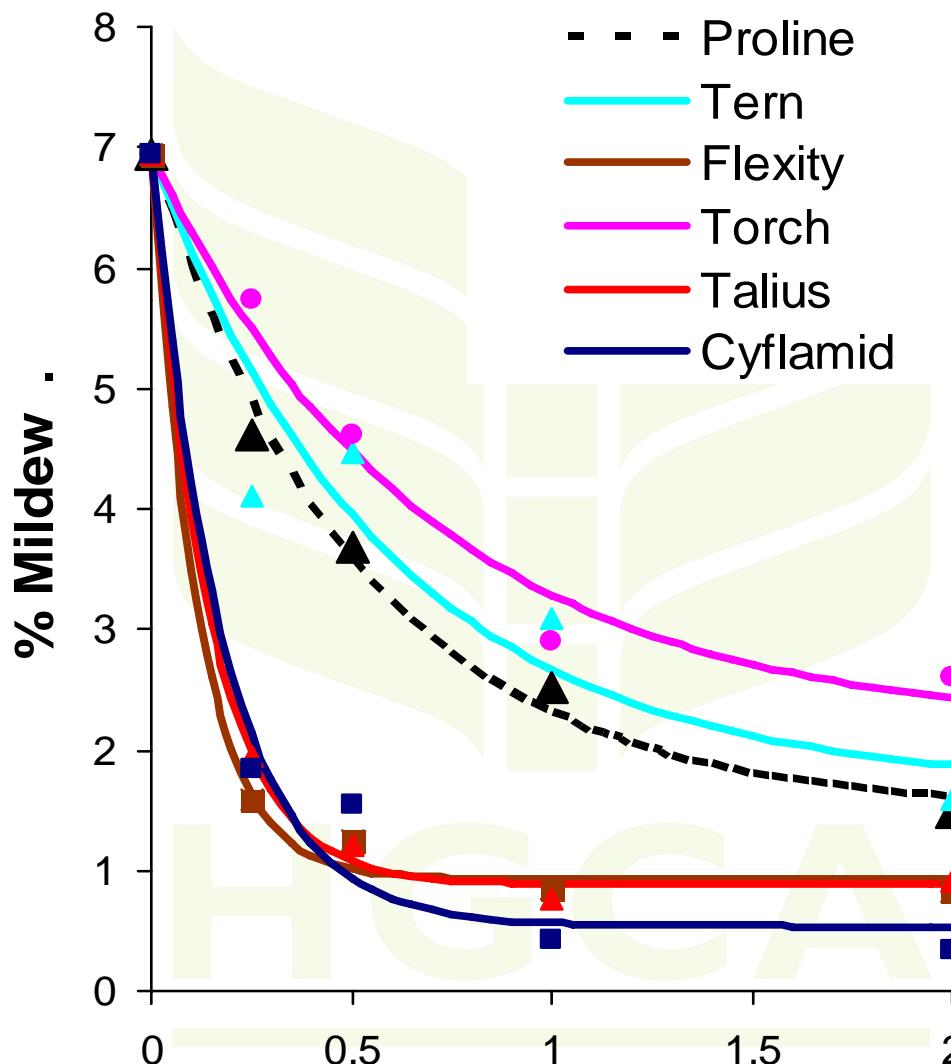
- Being found widely this autumn
- Significance likely to depend on spring conditions

Half label rates at T1 and T2 – mildew 2009

(Yield effects due to *S. tritici* and mildew)



Powdery Mildew – 4 year analysis



2009 Key messages for *S. tritici*

- Comparable field performance of Opus and Proline in 2009
- Following decline in performance in the 90's, no evidence of a shift in the field performance of Opus or Proline since 2001
- Half rate Brutus was as good as full rate Opus, despite having a lower azole content
- We have tested new products that showed up to 80% control in eradicant situations, over 90% control in protectant situations, and 5-10% better yield than average of Opus/Proline
- The rank order of products at T1 is similar to the order at T2
- Bravo – still a very effective protectant fungicide

2009 Key messages for Rusts and Mildew

Brown rust - protectant activity

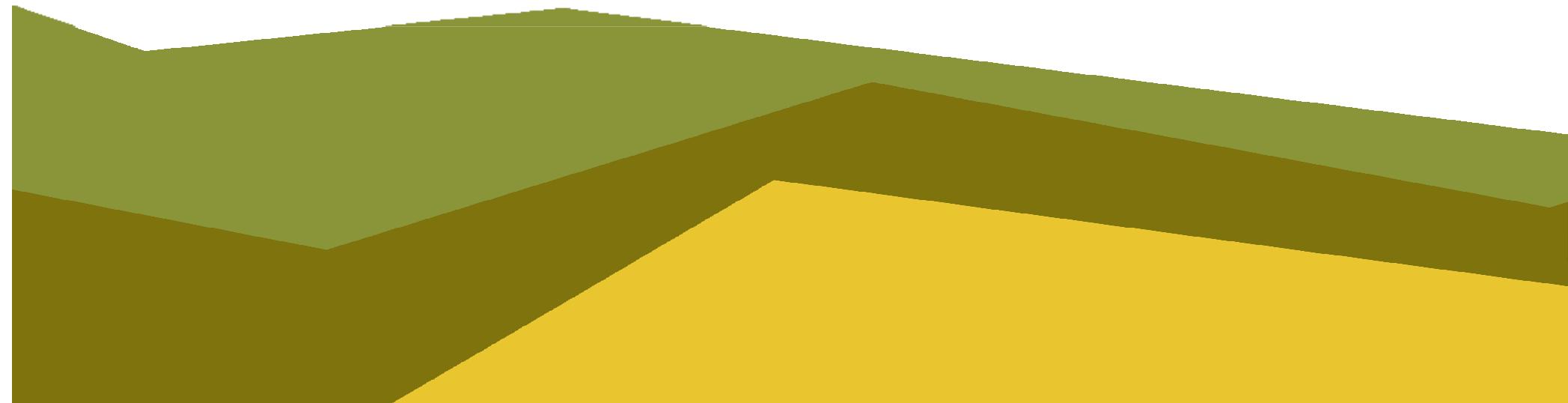
- Triazole rank order: Brutus > Opus > Proline
- New products will provide new modes of action and levels of control equal to or better than the triazoles
- Strobilurins still remain effective

Yellow rust - eradicant activity

- Triazole rank order Opus/Brutus > Proline
- New products will provide new modes of action with efficacy on yellow rust
- Strobilurins still remain effective

Mildew

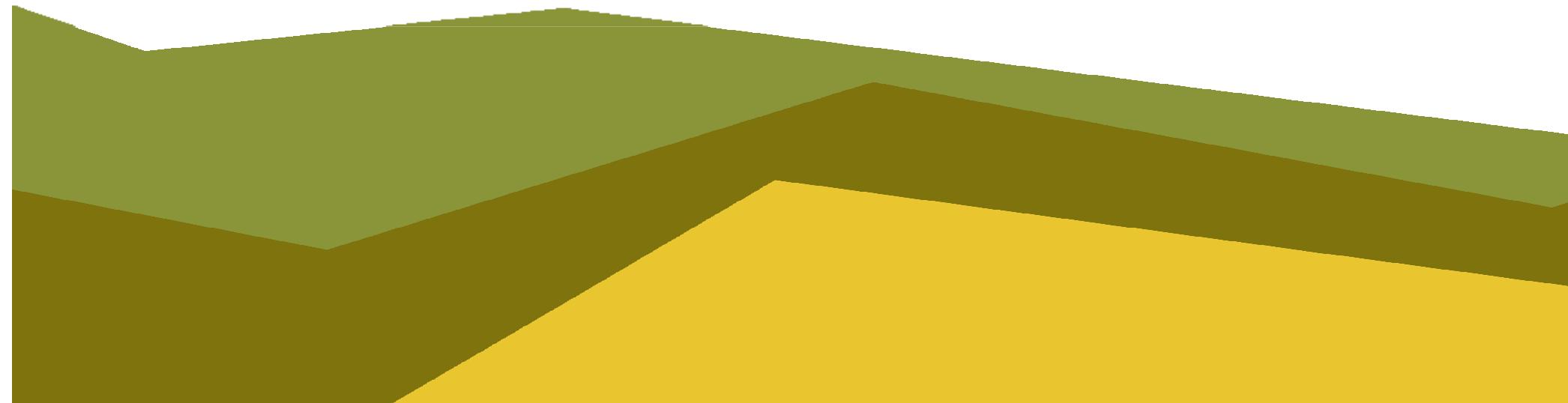
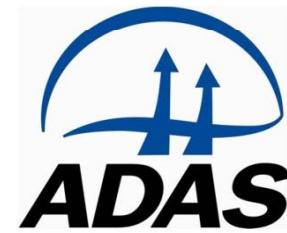
- Several different modes of action still show good control of mildew



HGCA Fungicide Performance in Barley



2009 - 2010

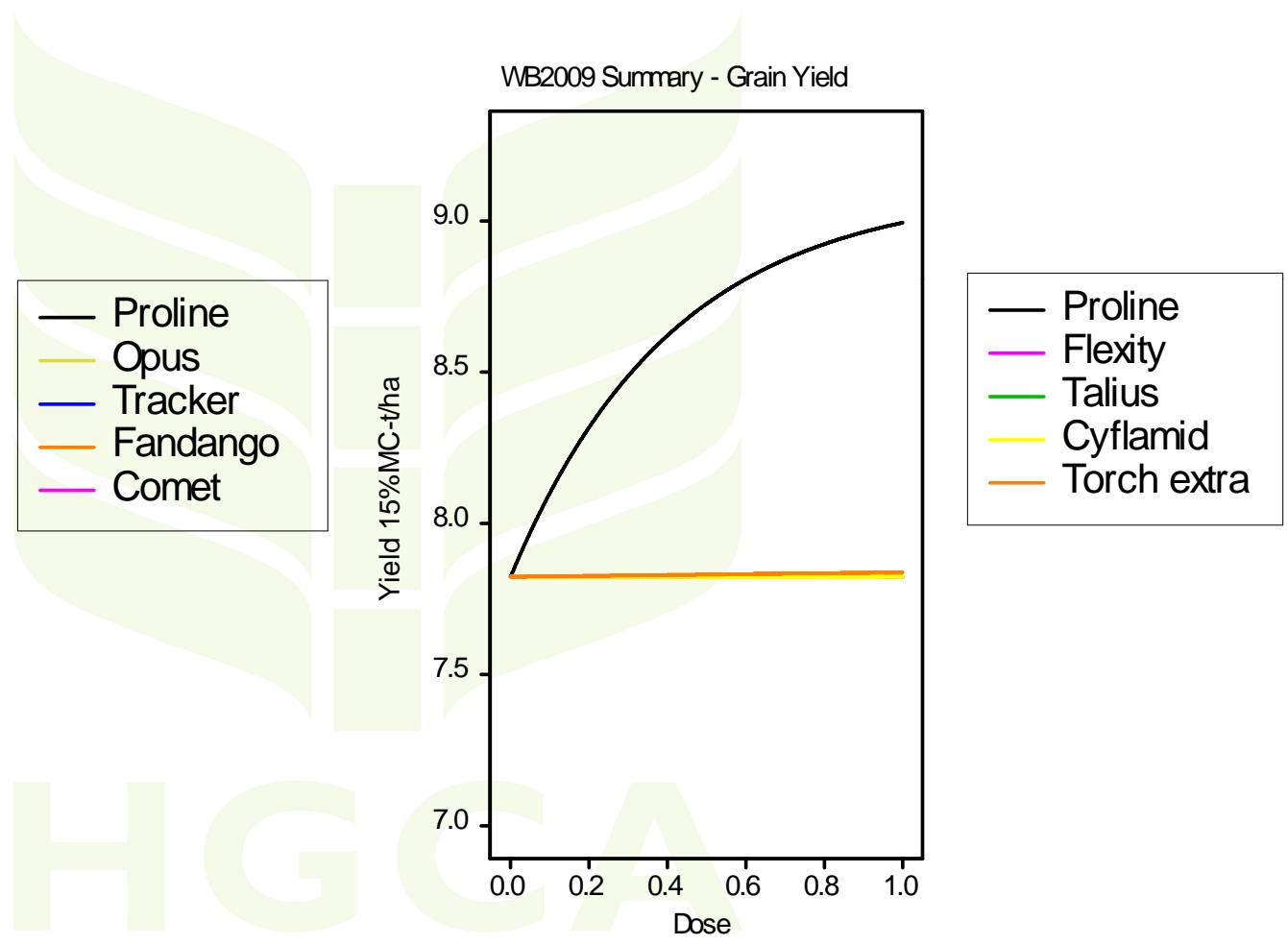
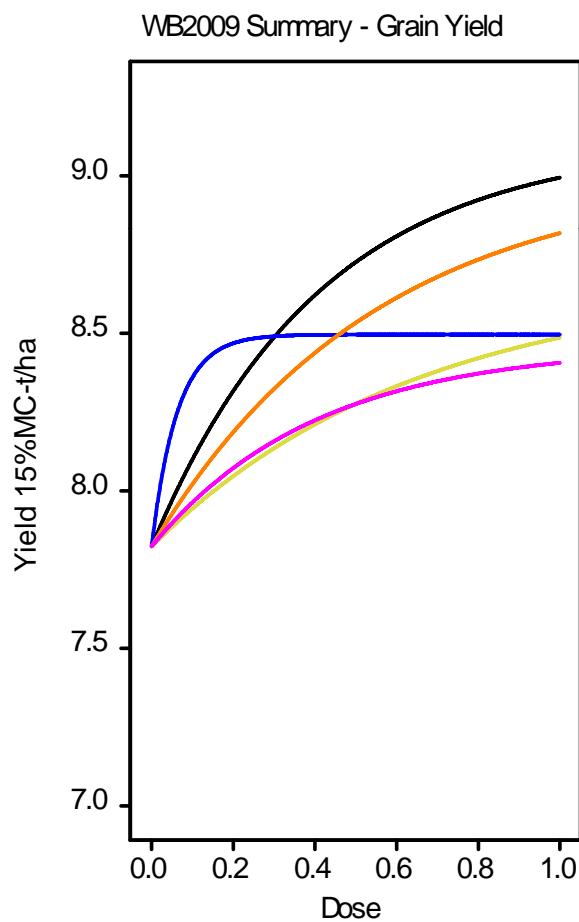


2009 - Fungicides tested

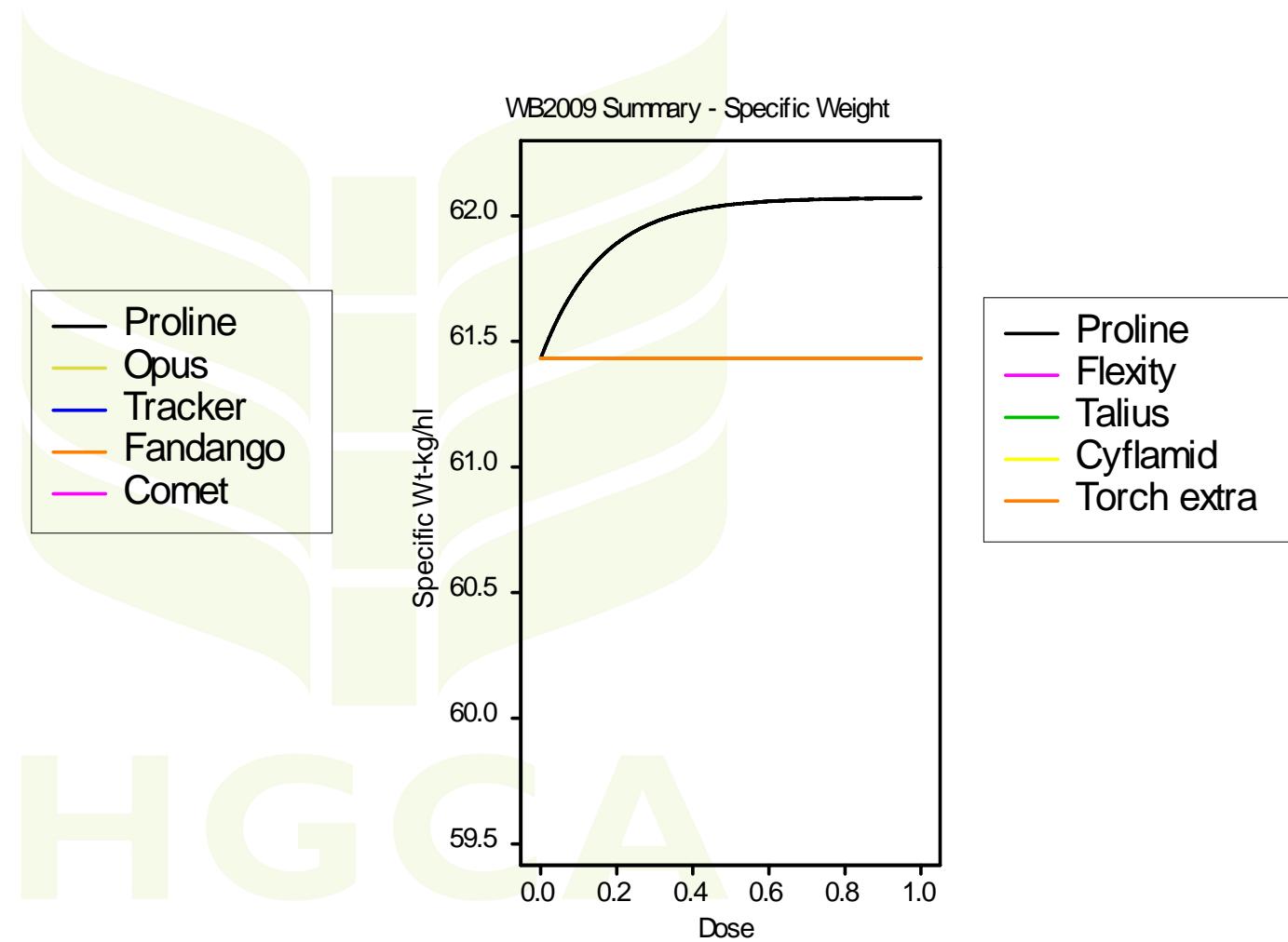
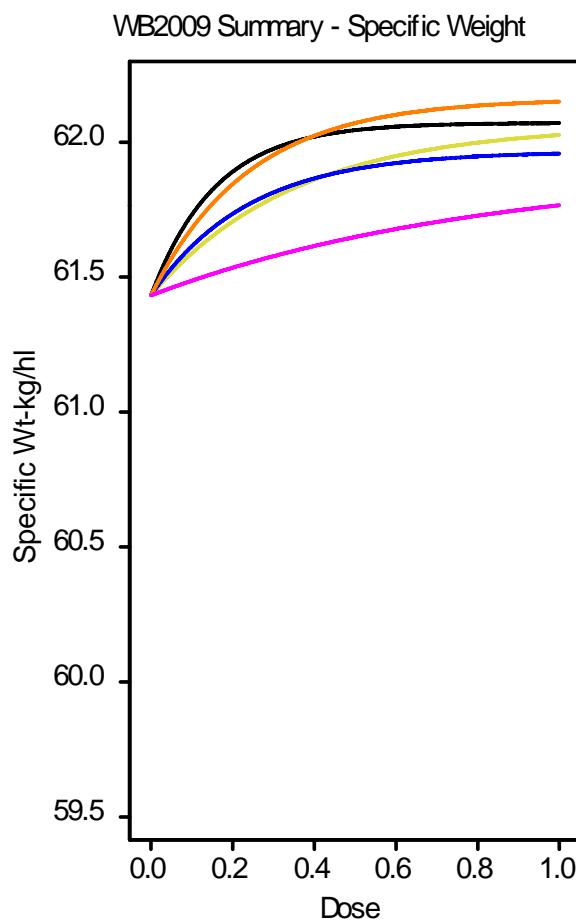


Product name	Active Ingredient
Amistar	azoxystrobin
Bravo	chlorothalonil
Comet	pyraclostrobin
Cyflamid	cyflufenamid
Fandango	fluoxastrobin + prothioconazole
Flexity	metrafenone
Fortress	quinoxyfen
Galileo	picoxystrobin
Kayak	cyprodinil
Opus	epoxiconazole
Proline	prothioconazole
Talius	proquinazid
Torch extra	spiroxamine
Tracker	epoxiconazole + boscalid

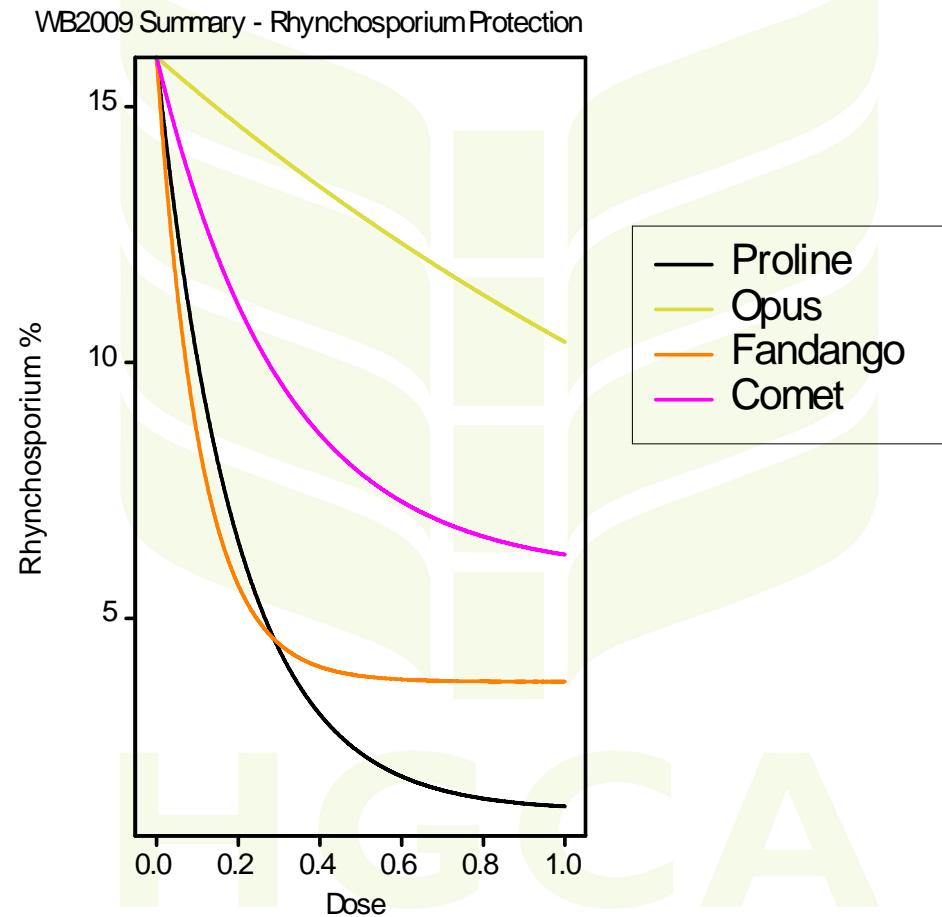
Winter Barley Yield



Winter Barley Specific Weight

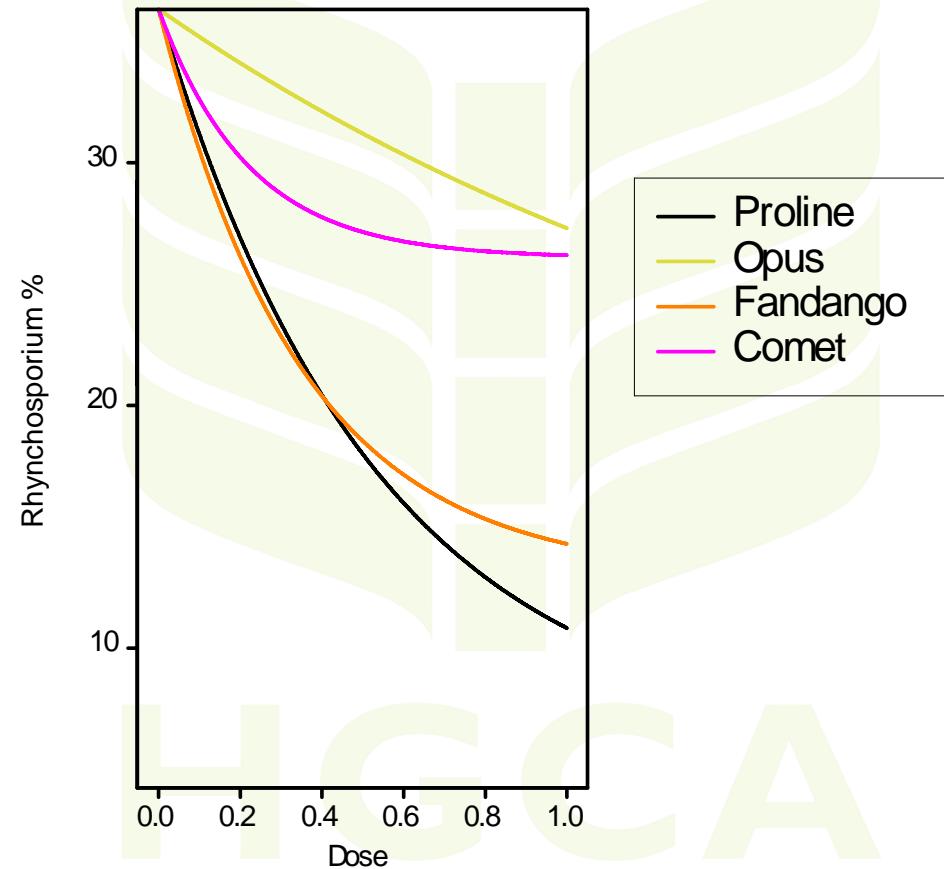


Winter Barley Rhynchosporium: Protectant

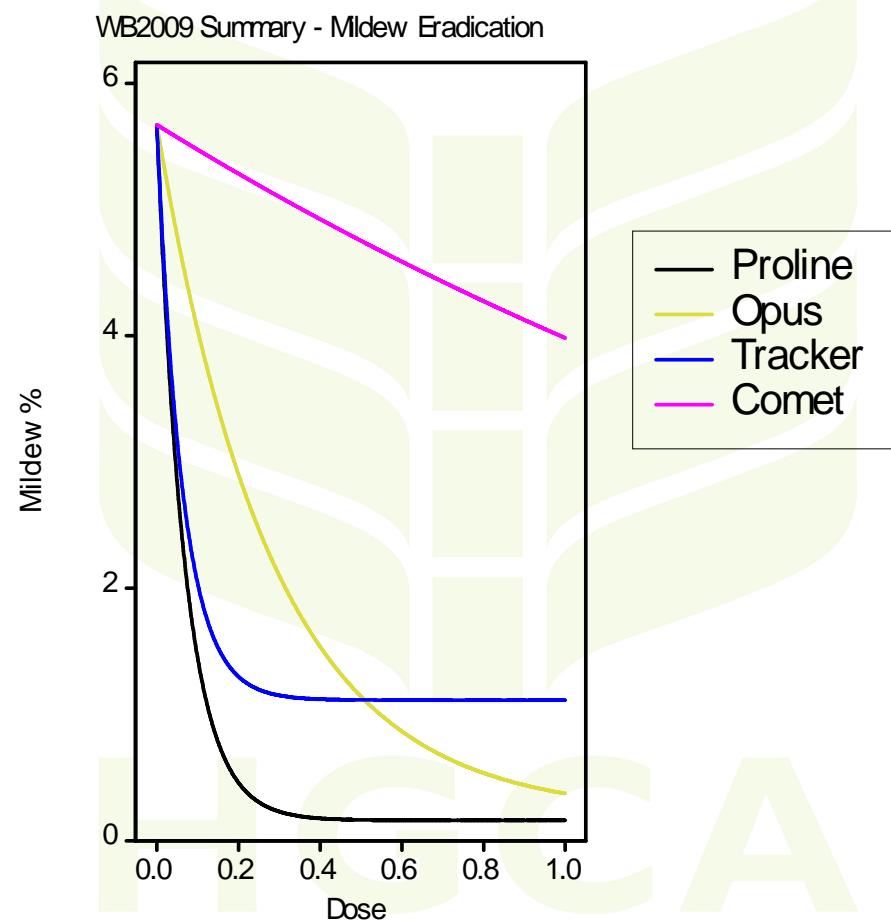


Winter Barley Rhynchosporium: Eradicant

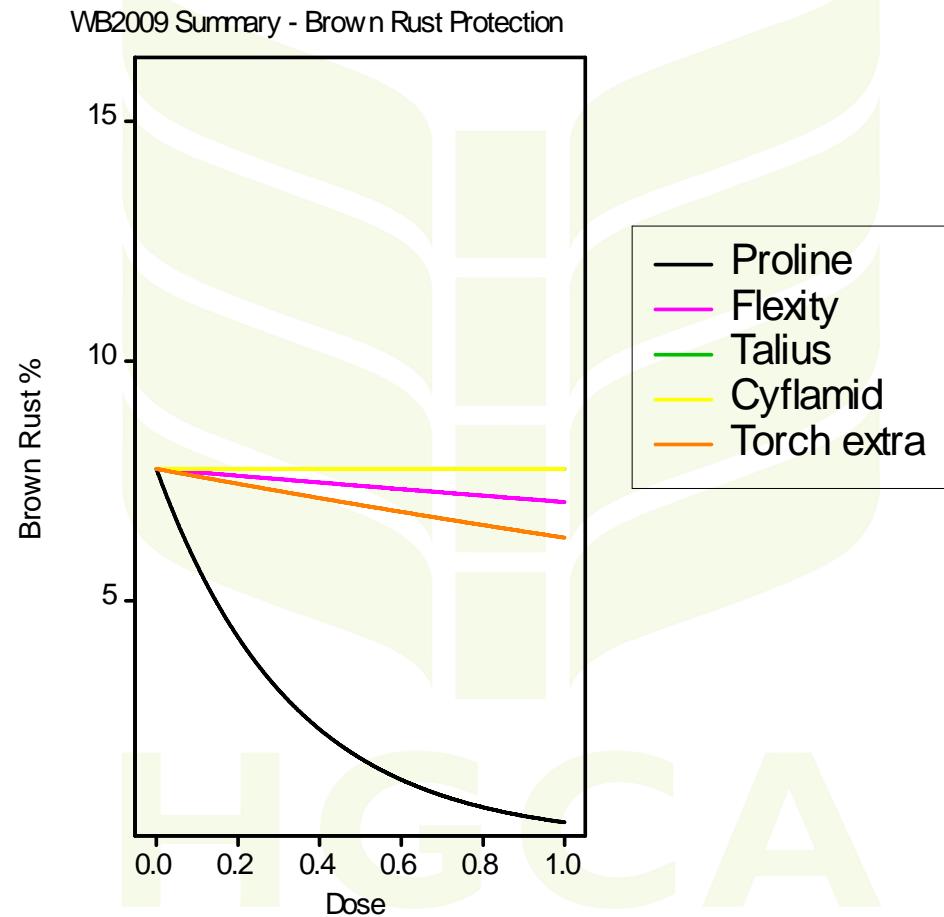
WB2009 Summary - Rhynchosporium Eradication



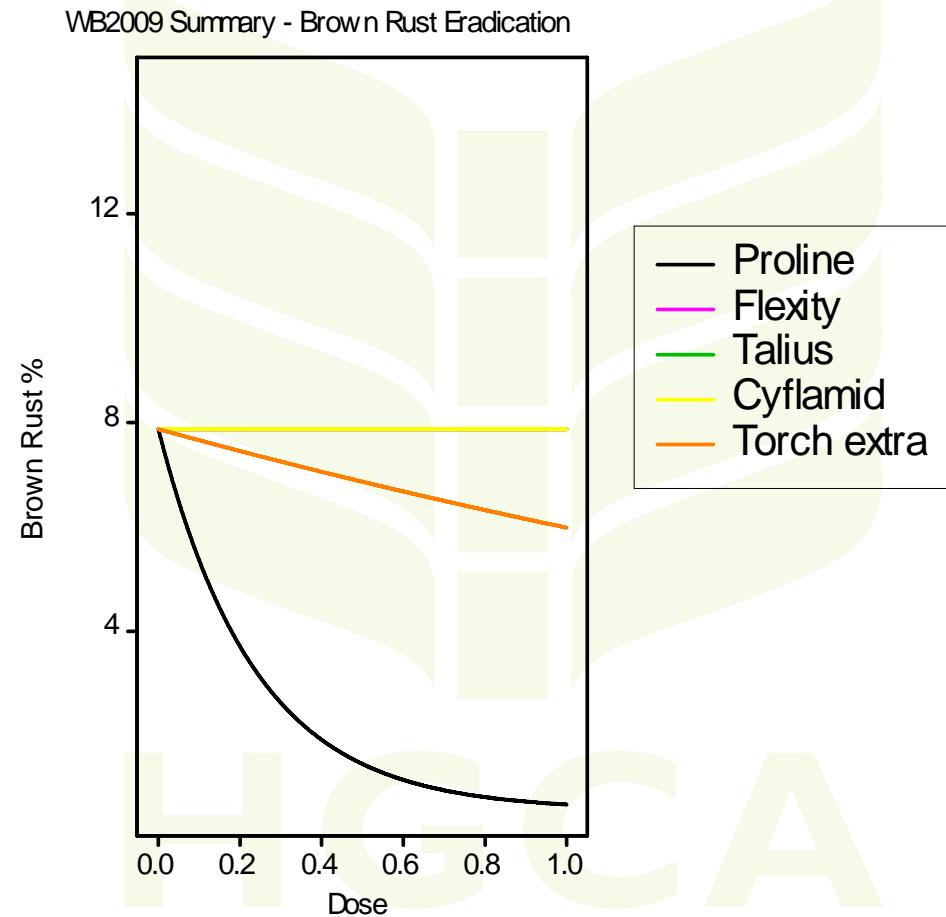
Winter Barley Mildew: Eradicant



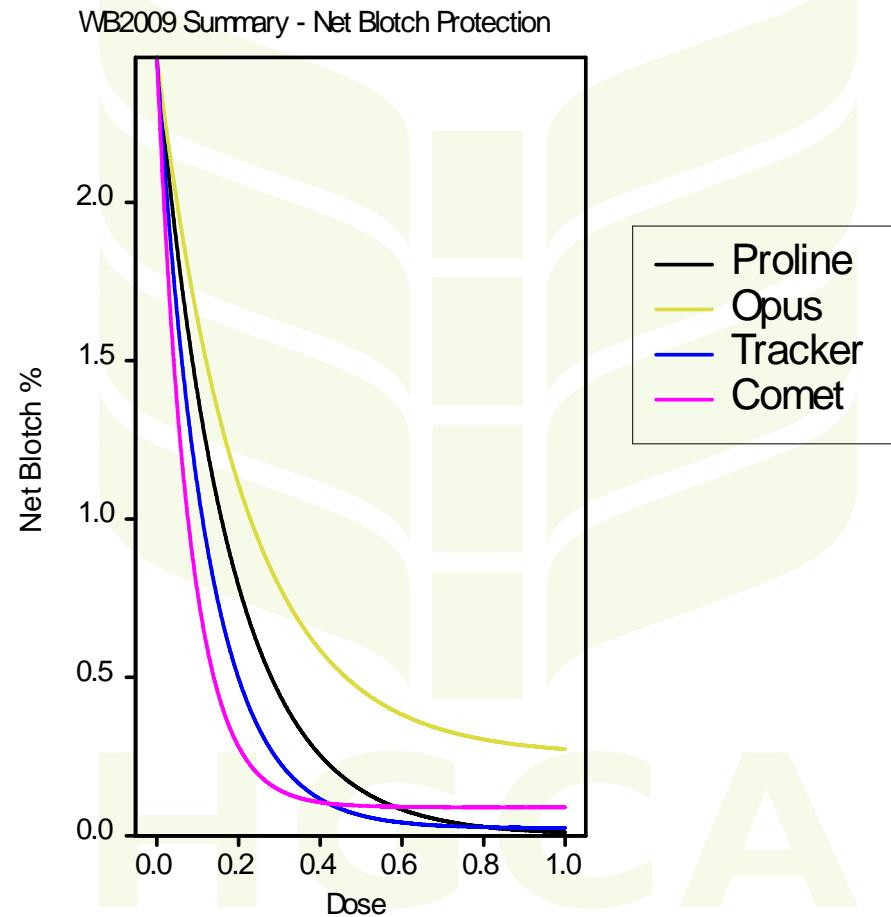
Winter Barley Brown Rust: Protectant



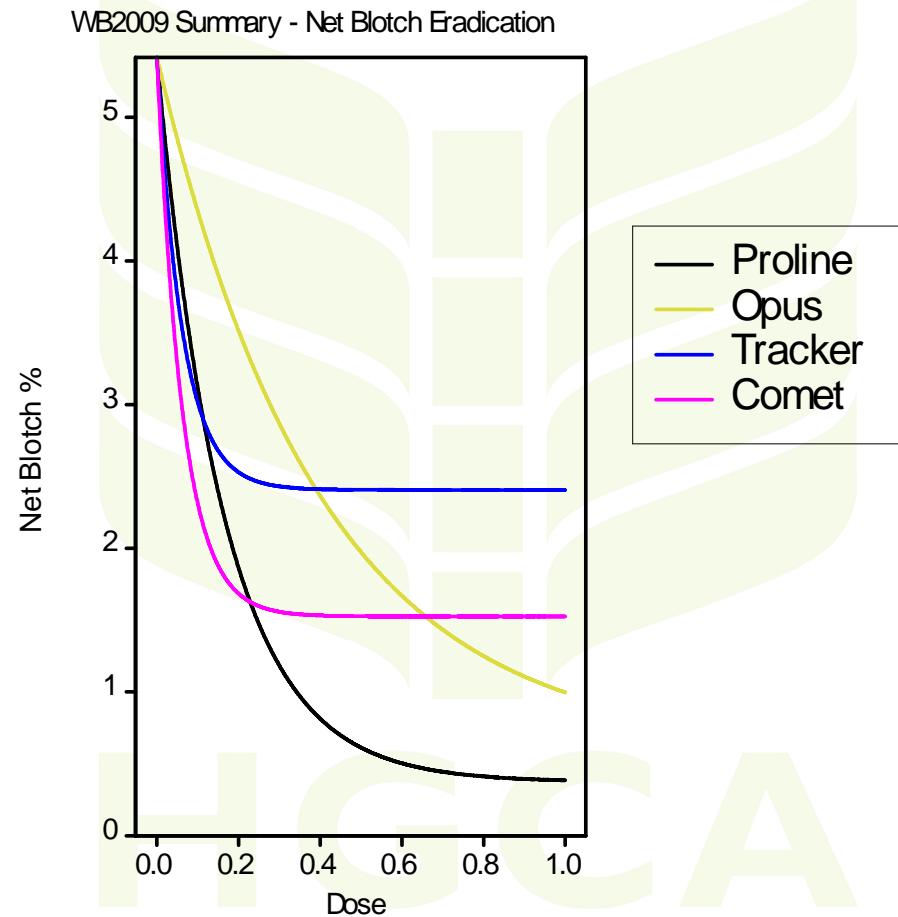
Winter Barley Brown Rust: Eradicant



Winter Barley Net Blotch: Protectant

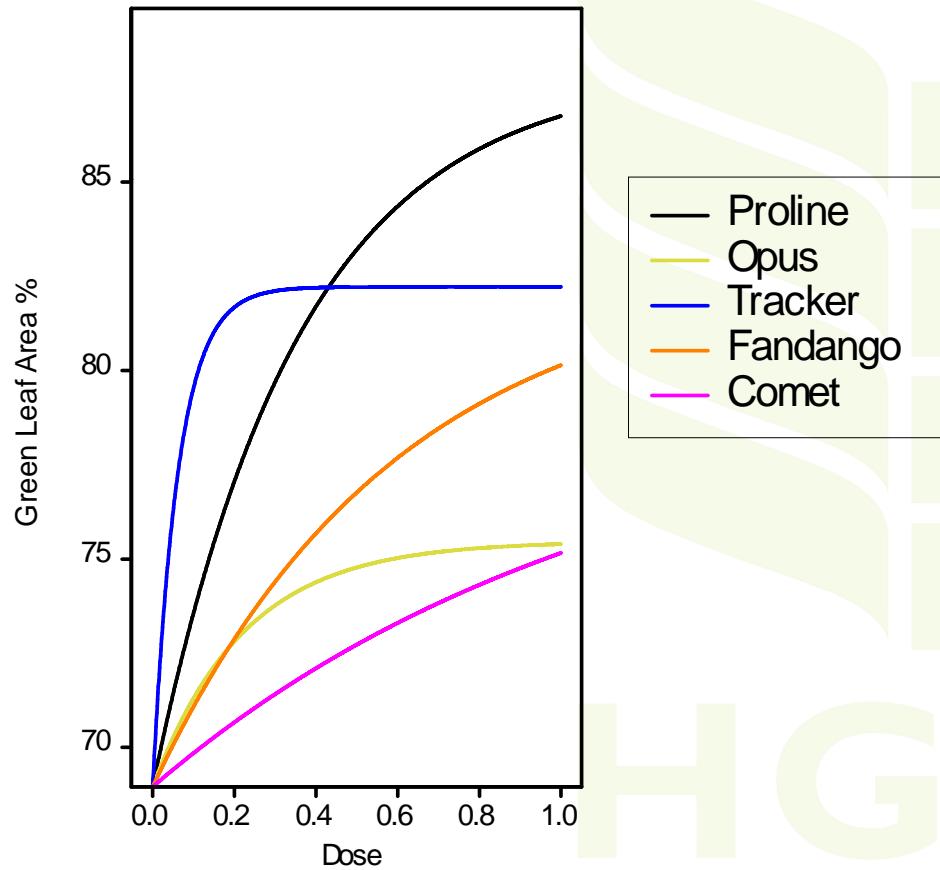


Winter Barley Net Blotch: Eradicant

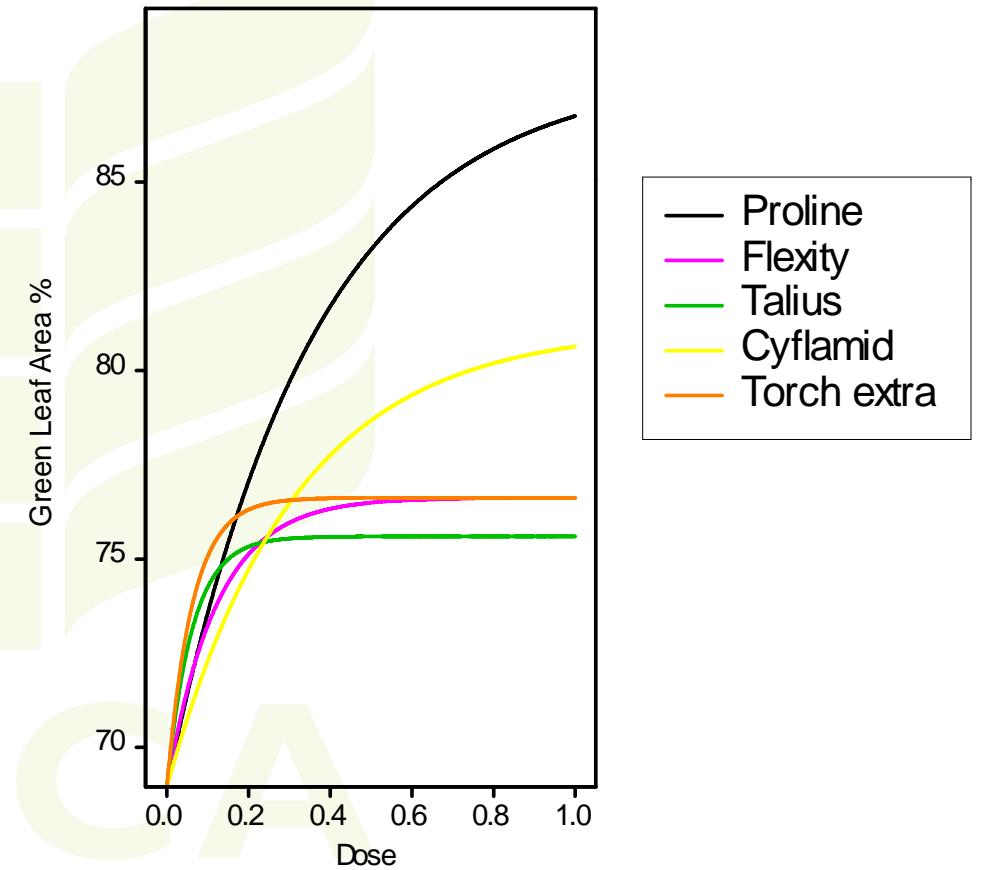


Winter Barley Early Green Leaf Area

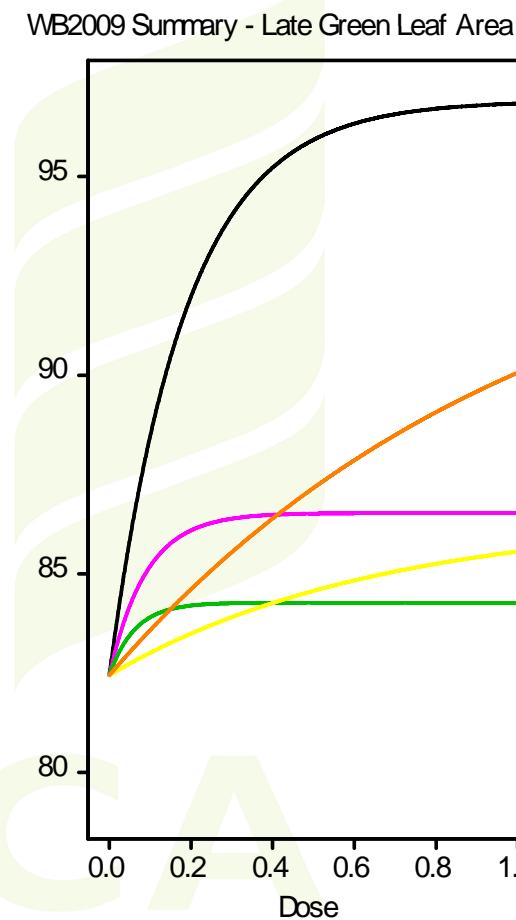
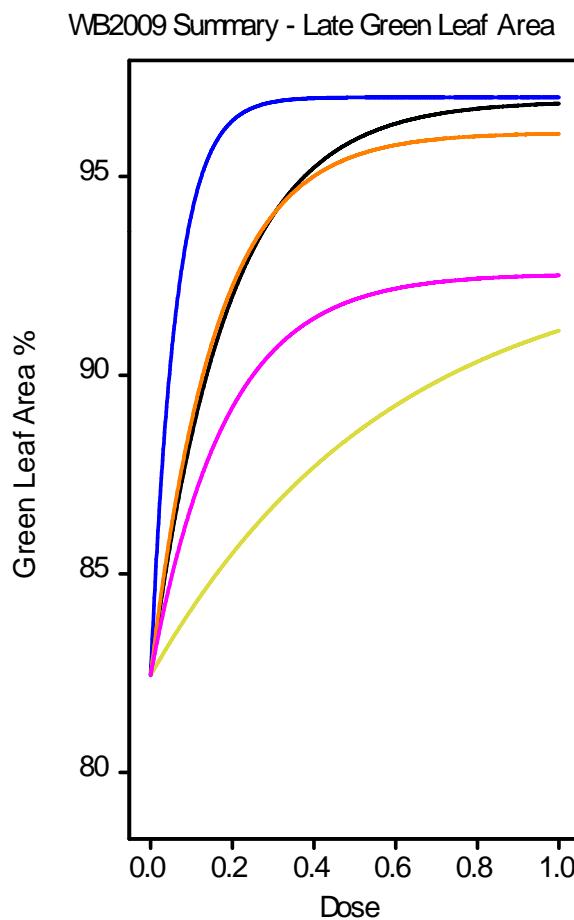
WB2009 Summary - Early Green Leaf Area



WB2009 Summary - Early Green Leaf Area



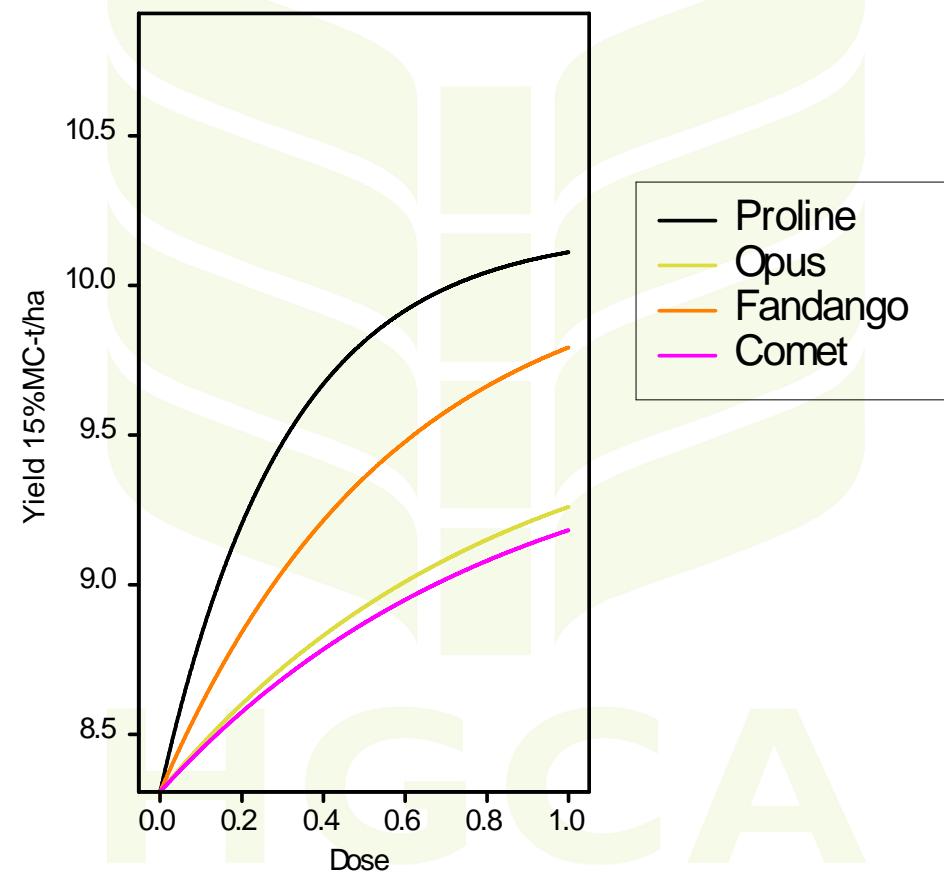
Winter Barley Late Green Leaf Area



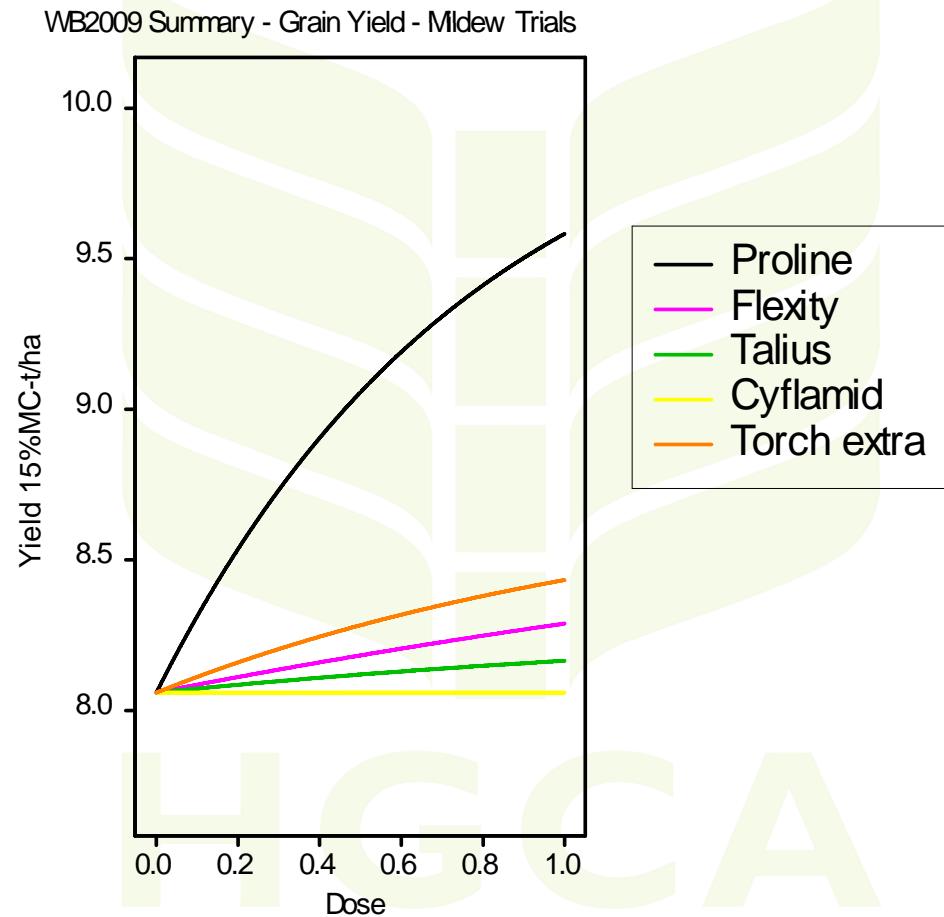
Winter Barley Yield Rhynchosporium Trials



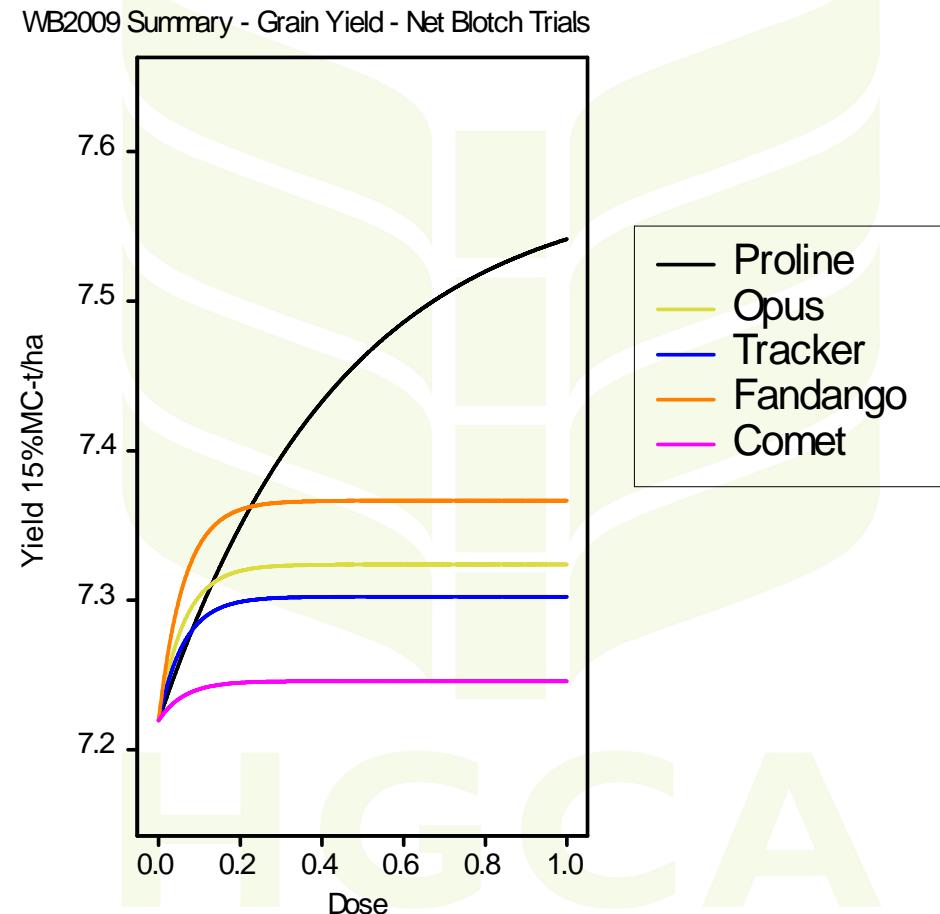
WB2009 Summary - Grain Yield - Rhynchosporium Trials



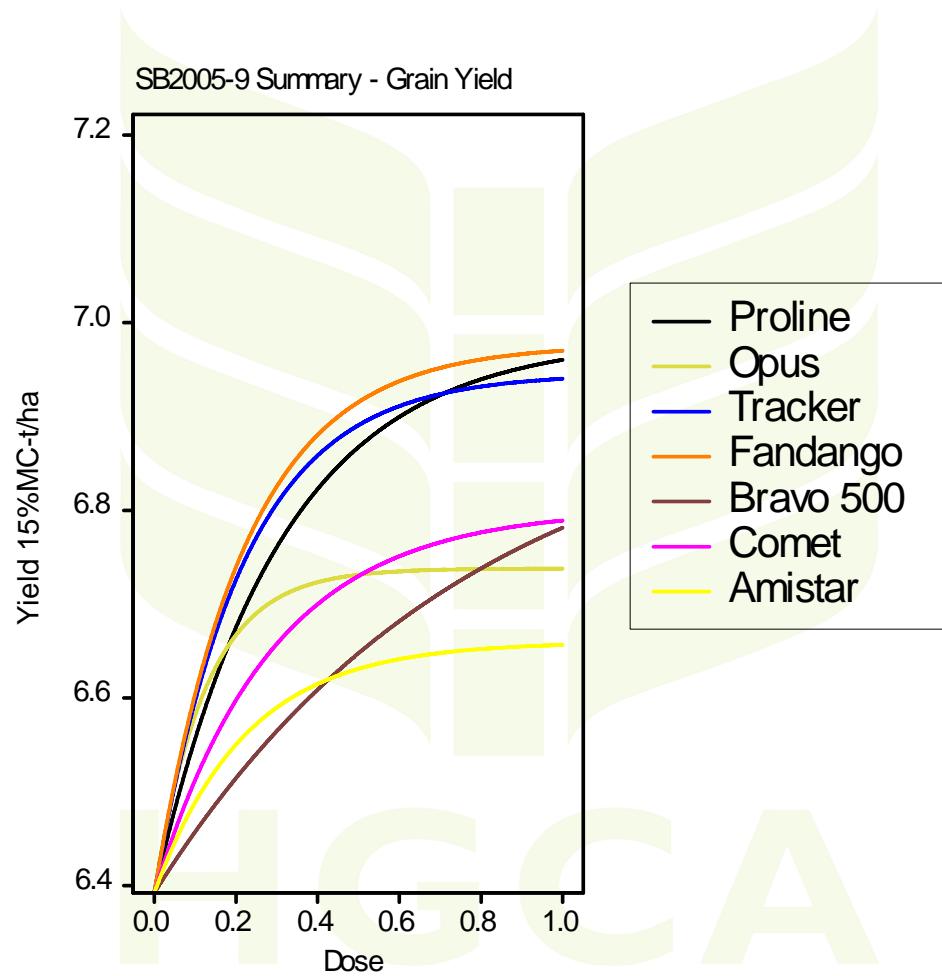
Winter Barley Yield Mildew Trials



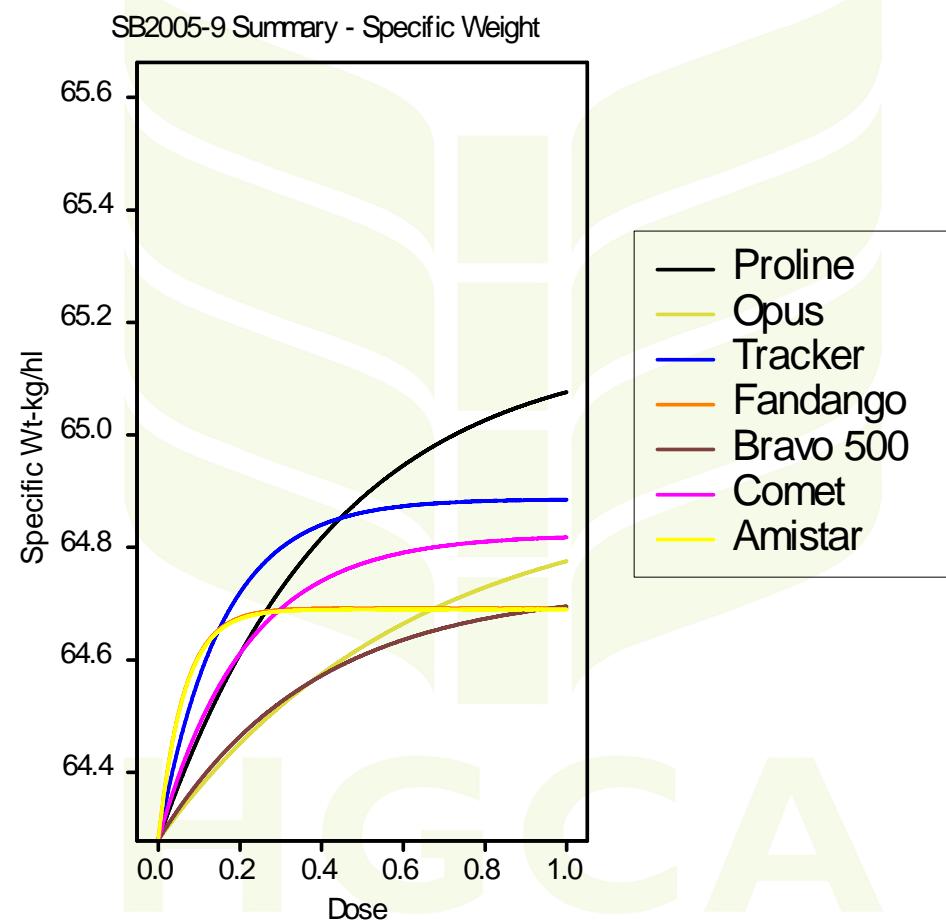
Winter Barley Yield Net Blotch Trials



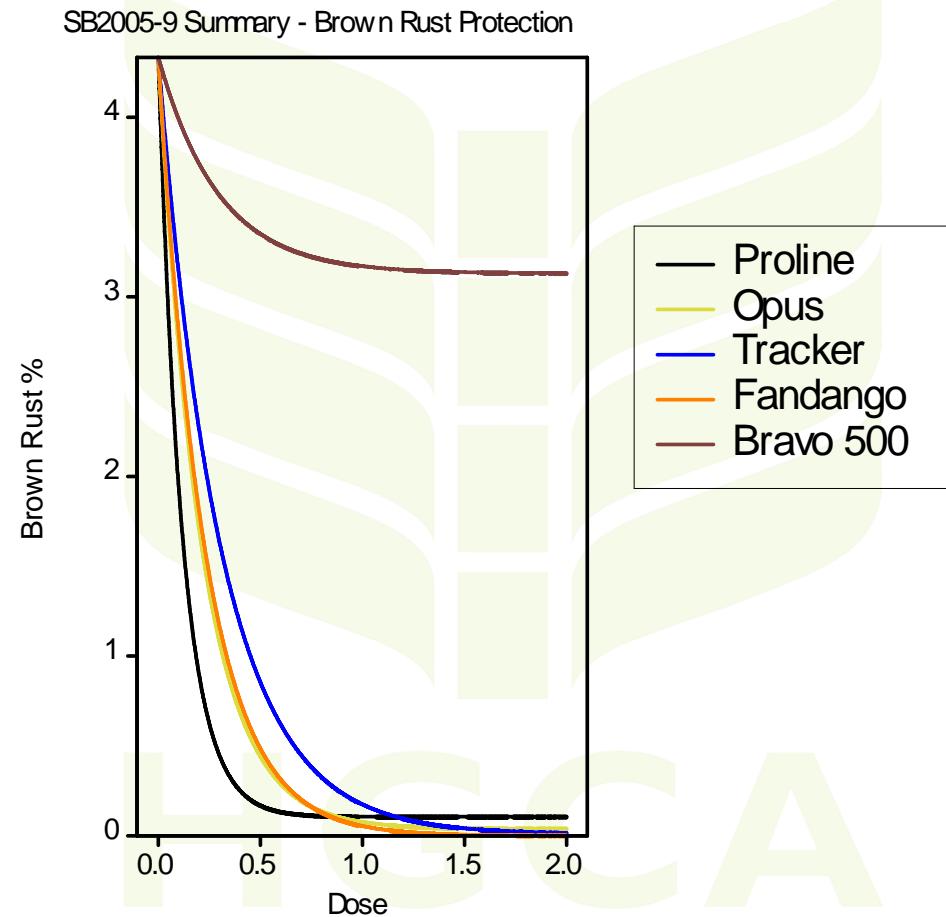
Spring Barley Yields



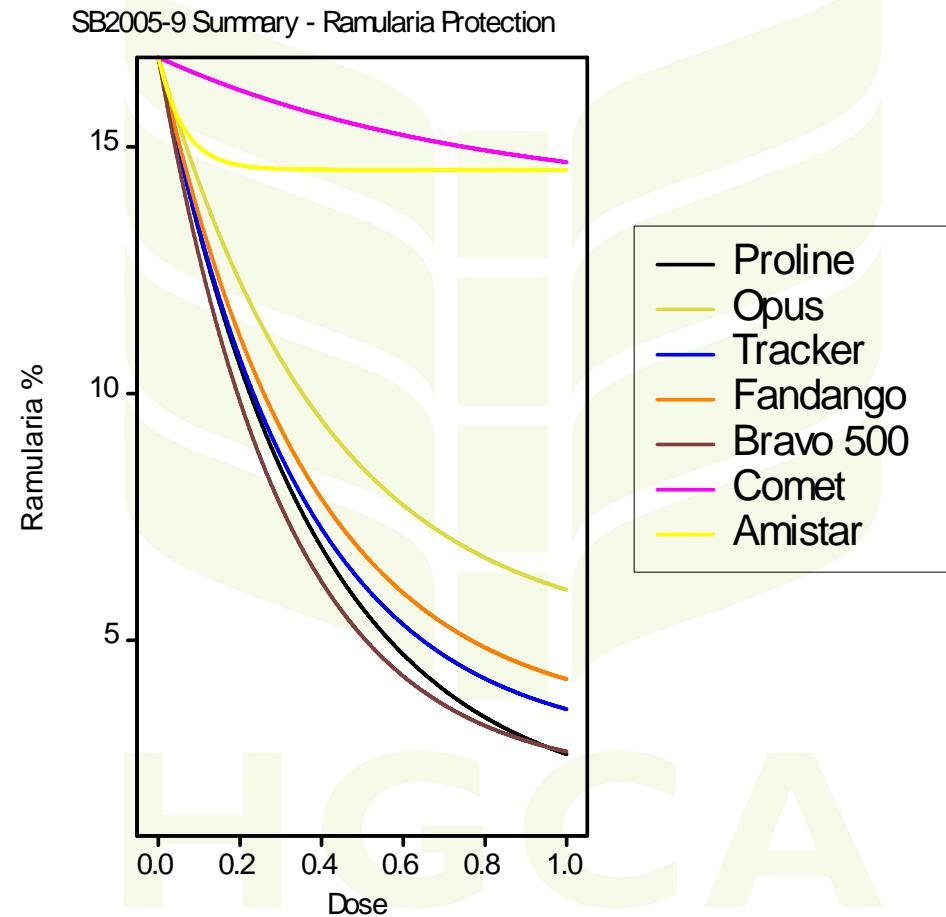
Spring Barley Specific Weight



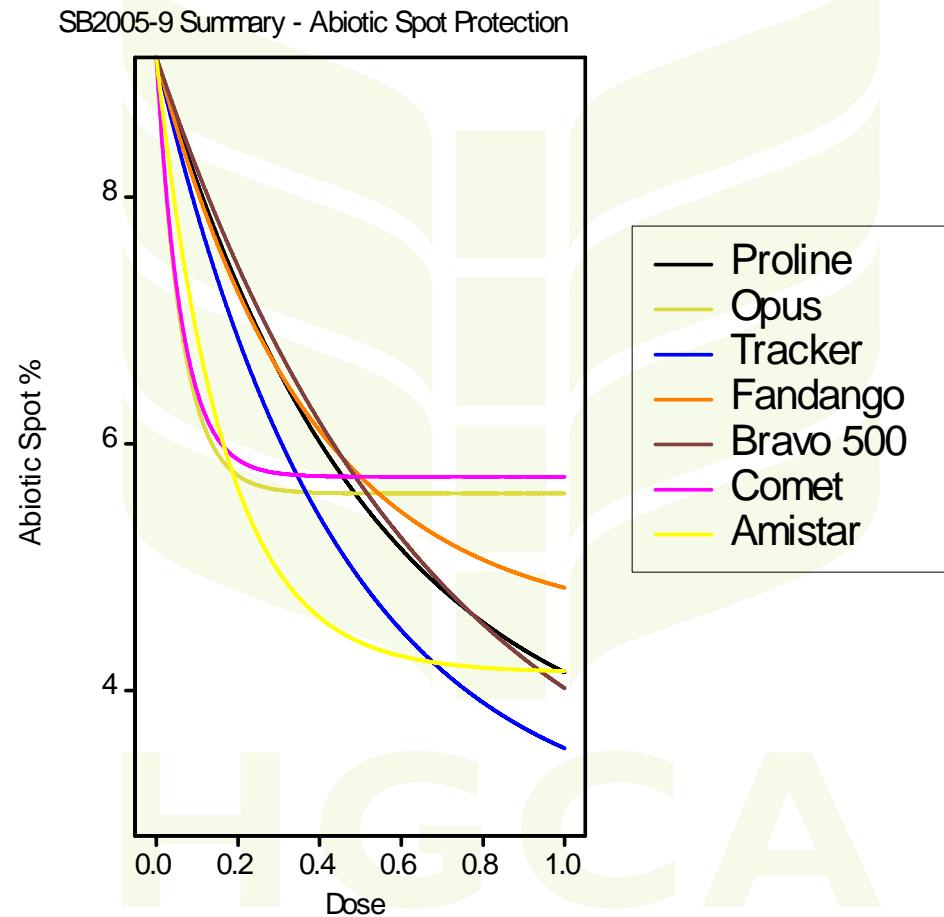
Spring Barley Brown Rust: Protectant



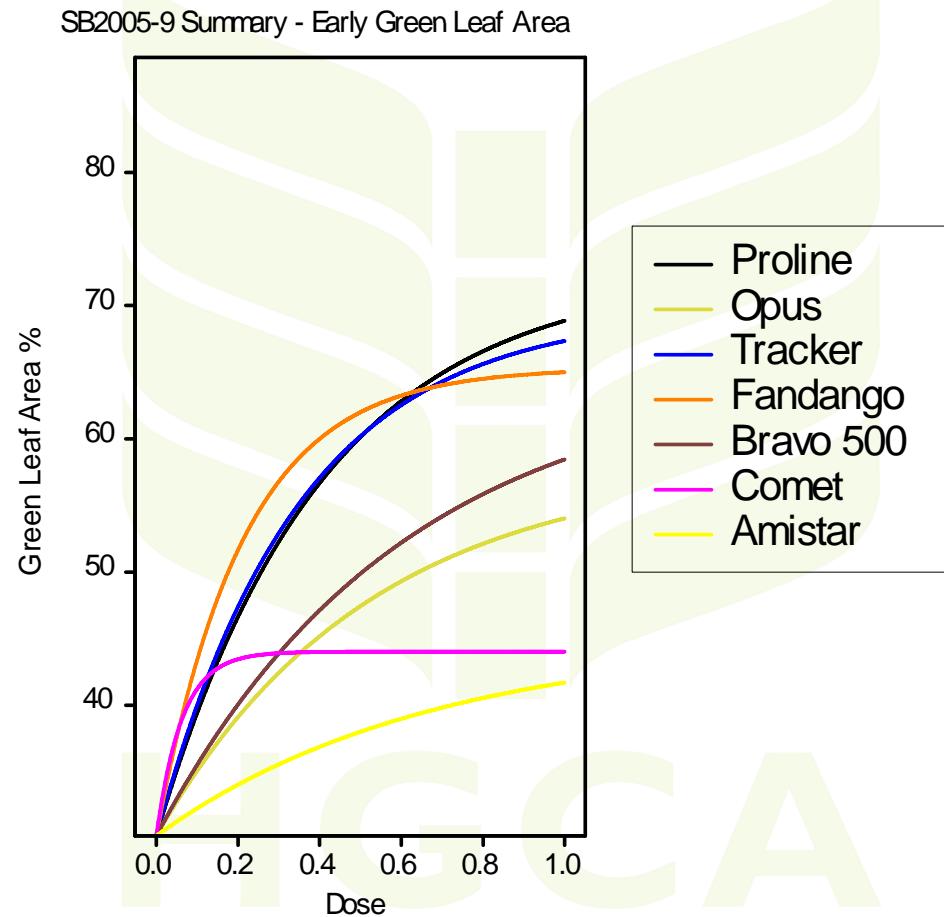
Spring Barley Ramularia: Protectant



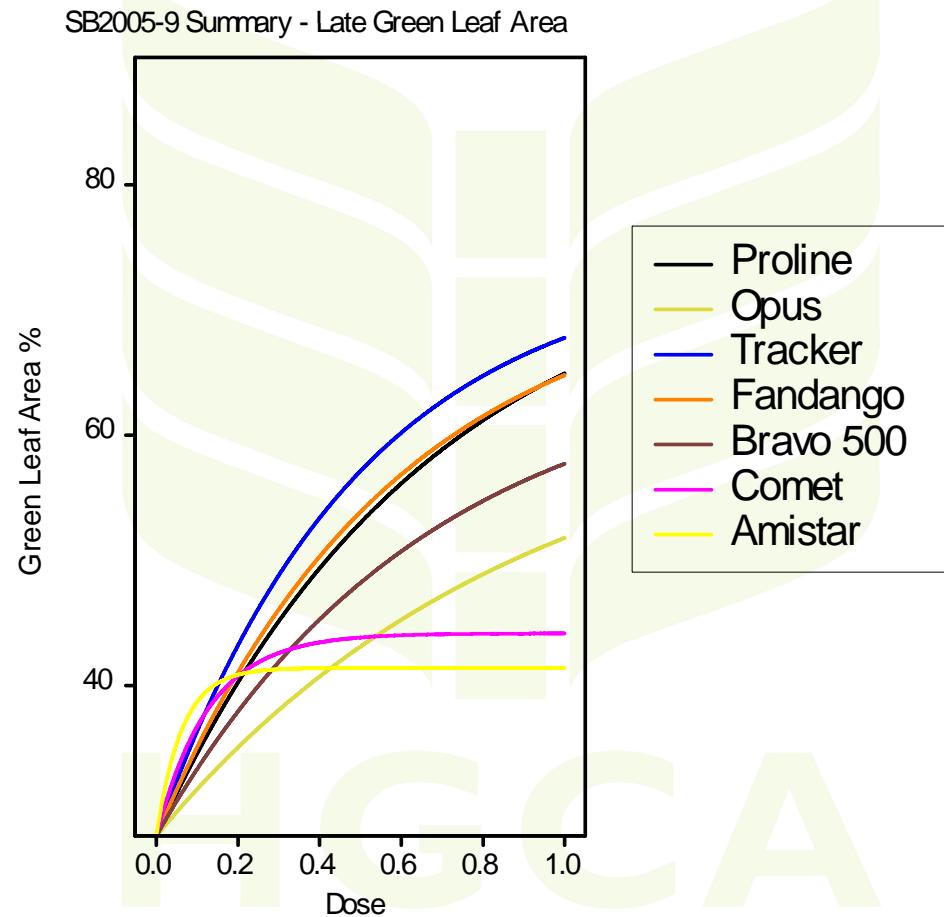
Spring Barley Abiotic Leaf Spot Protection



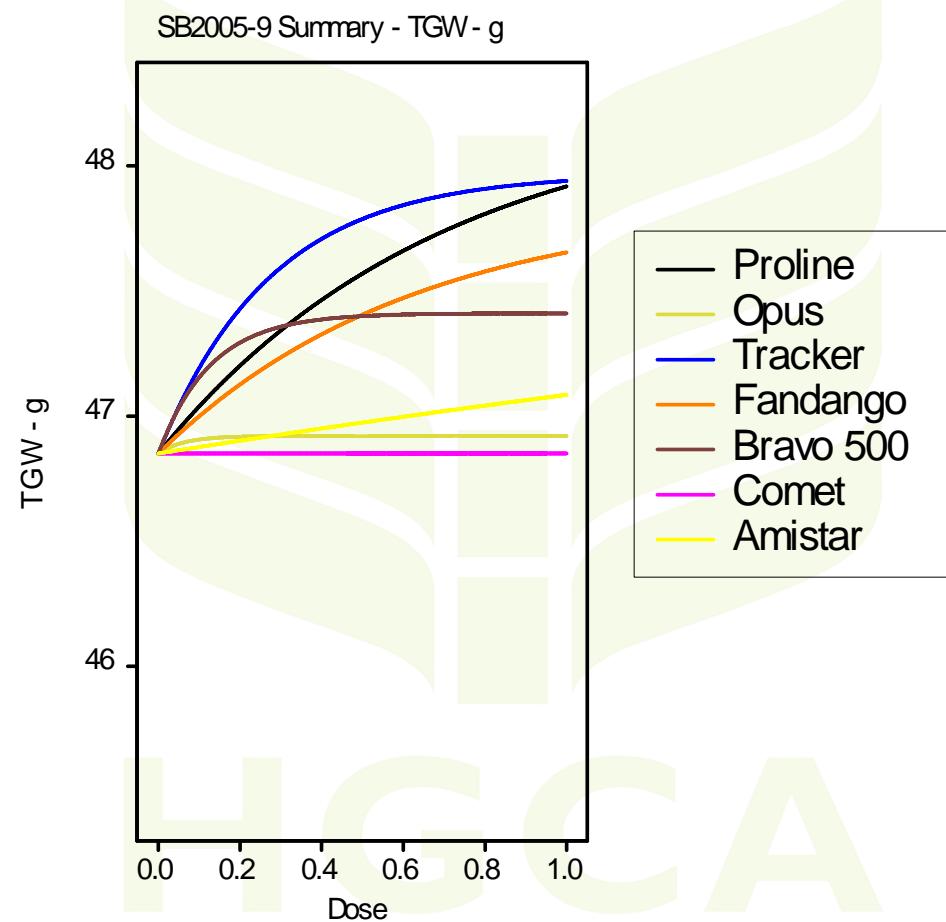
Spring Barley Early Green Leaf Area



Spring Barley Late Green Leaf Area



Spring Barley Thousand Grain Weight



Spring barley % Screenings (2.5 mm)

